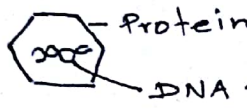
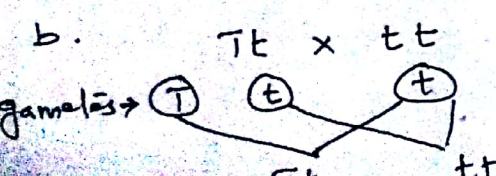


Second terminal Evaluation - 2018-19

Answer key. Biology. Max. score. 50.

Score.

- 1- d. Gibberellin - Break up of stored food in seed - 1
2. Aqueous humor. - 1
3.  - Protein coat  
DNA. - 1
- 4 c. The antigen of the received blood and antibody of the recipient's blood will react each other. - 1
5. Keratin. Others are related to defense in plants. / provide rigidity to the cell wall - 1
- 6- b and d. Bacterial DNA is used as vectors in genetic engineering. Medicines are extracted from the blood and milk of 'Pharm animals' - 1
7. A synapse is the junction between two neurons or between a neuron and a muscle cell or between a neuron and a gland cell. - 2
8. a. Tuberculosis - 1  
b. BCG. - 1 } 2
9. a. Gene defect / defect in protein synthesis - (protein related to blood clotting) - 1  
b. No, it is a genetic disease - 1 } 2
10. Injects germs of typhoid into blood  
Antibodies are formed  
Antibodies destroy pathogen  
Induced immunity is sustained.  $4 \times \frac{1}{2} = 2$
- 11- Tears, saliva, gastric juice, sebum, ear wax etc. - 2
12. a. Tallness  
b.  - 1/2 } 2  
Tall : dwarf - 1/2  
1 : 1

13. a. Genetic engineering  $-\frac{1}{2}$   
 b. Stage 1. Restriction endo nuclease  $-\frac{1}{2}$   
     " 2. Restriction endo nuclease  $-\frac{1}{2}$   
     " 3. Ligase.  $-\frac{1}{2}$  } 2.

14. a. i. Calcitonin ii - Parathormone.  $\frac{1}{2} + \frac{1}{2} = 1$   
 b. iii - Prevents the mixing of Ca from bones to blood/  
     deposits excess blood Ca in bones.  $-1$   
     iv - Reabsorbs Ca from kidneys/  
     prevents deposition of Ca in bones.  $-1$  } 3

- 15- Brain < Stroke  
     Addiction to nicotins  
 Lungs < lung cancer  
     Bronchitis / Emphysema.  
 Heart < High BP  
     Loss elasticity of artery.  
     Loss of functional efficiency of heart }  $6 \times \frac{1}{2} = 3$

- 16- a. Ultrasound scanner  
 b. Sphygmomanometer  
 c. to record electric waves in the brain  
 d. to get 3-D views of internal organs with computer x-ray.  
 e. Stethoscope  
 f. To record electric waves in the heart muscle }  $6 \times \frac{1}{2} = 3$

17. Tissues from wounds degenerate and forms thrombo-  
 -Plastin enzyme - In presence of Ca ions and vit. K  
 thromboplastin converts prothrombin to thrombin-  
 thrombin converts fibrinogen to fibrin - Platelets  
 and RBC entangle in the fibrin network - 3

- 18- a. i.  $22+Y$  ii  $44+XY$   $\frac{1}{2} + \frac{1}{2} = 1$   
 b. Male gamete containing X chromosome and  
 male gamete containing Y chromosome are  
 produced in equal numbers. Therefore their chance  
 to unite with female gamete is equal. So (3)  
 the number of male ( $44+XY$ ) and that of female  
 ( $44+XX$ ) is almost equal.  $2.$

19. Protein Synthesis / Gene action.

b. X - mRNA Y - ribosome  $\frac{1}{2} + \frac{1}{2} = 1$

c. mRNA carries message for protein synthesis from DNA to ribosome.  $\frac{1}{2}$

- Protein synthesis takes place in ribosomes.  $\frac{1}{2}$

3

20- A Glaucoma. Failure is the reabsorption of aqueous humor - LASER Treatment

xerophthalmia - Cornea become dry and opaque. - Vit. A rich food

Cataract. - Eye lens become opaque - Lens replacement.  
 $6 \times \frac{1}{2} = 3$ .

21- A. Bacteria B. Contaminated water/food

C. Virus D. Mosquito

E. protozoa. F. Malaria.

G. Filarial worms H. Contact.  $8 \times \frac{1}{2} = 4$  Marks.

22. a. Neutrophil and Monocyte  $\frac{1}{2} + \frac{1}{2} = 1$

b. Basophil. and lymphocyte  $\frac{1}{2} + \frac{1}{2} = 1$

c. lymphocyte (B-lymphocyte)  $-\frac{1}{2}$

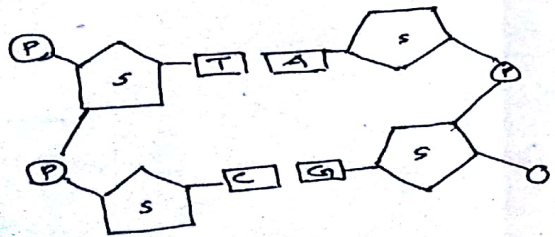
d. - Destroy bacteria by disintegrating their cell membrane  $-\frac{1}{2}$

- Neutralize the toxins of the antigen.  $-\frac{1}{2}$

- Stimulate other WBC to destroy pathogen.  $-\frac{1}{2}$

4

23.



Score -

Exclusion of Uracil nucleotide  $-\frac{1}{2}$

Correct pairing - AT, CG  $- 2$

Opposite direction of sugar molecule  $-\frac{1}{2}$

Neatness of diagram  $- 1$

4