



**Green View public School**  
**Periodic Test - 1**  
**Biology**  
**Class : XII**

Roll No. :  
 Date : 18/07/2020

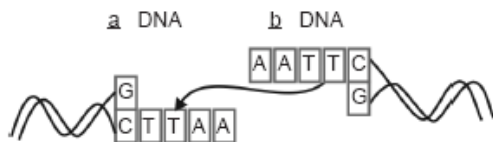
Time - 1 Hour  
 MM - 25

1. How does malaria differ from chikungunya with reference to their vectors? 1
2. What causes swelling of the lower limbs in patients suffering from filariasis? 1
3. Mention the information that the health workers derive by measuring BOD of a water body. 1
4. In the year 1963, two enzymes responsible for restricting the growth of bacteriophage in *E.coli* were isolated. How did the enzymes act to restrict the growth of the bacteriophage? 1
5. Suggest a technique to a researcher who needs to separate fragments of DNA. 1
6. Identify a, b, c and d in the following table: 2

Name of the human disease	Name of the causal bacteria/virus	Specific organ or its part affected
1. Typhoid	<i>Salmonella typhi</i>	a
2. Common cold	b	c
3. Pneumonia	<i>Streptococcus pneumoniae</i>	d

7. A young boy when brought a pet dog home, started to complain of watery eyes and running nose. The symptoms disappeared when the boy was kept away from the pet.  
 (a) Name the type of antibody and the chemicals responsible for such a response in the boy.  
 (b) Mention the name of any one drug that could be given to the boy for immediate relief from such a response. 2

8. 2



Study the linking of DNA fragments shown above.

- (i) Name 'a' DNA and 'b' DNA.
- (ii) Name the restriction enzyme that recognises this palindrome.
- (iii) Name the enzyme that can link these two DNA fragments.
9. Why and how can bacteria be made 'competent'? 2
10. (a) Name a drug used: 3
  - (i) as an effective sedative and painkiller,
  - (ii) for helping patients to cope with mental illnesses like depression, but often misused.
- (b) How does the moderate and high dosage of cocaine affect the human body?
11. Given below is a list of six micro-organisms. State their usefulness to humans. 3
  - (a) *Nucleopolyhedrovirus*
  - (b) *Saccharomyces cerevisiae*
  - (c) *Monascus purpureus*
  - (d) *Trichoderma polysporum*
  - (e) *Penicillium notatum*
  - (f) *Propionibacterium sharmanii*
12. How are baculoviruses and *Bacillus thuringiensis* used as biocontrol agents? Why are they preferred over readily available chemical pesticides? 3

13. Rearrange the following in the correct sequence to accomplish an important biotechnological reaction:

3

- (a) *In vitro* synthesis of copies of DNA of interest.
- (b) Chemically synthesised oligonucleotides
- (c) Enzyme DNA polymerase
- (d) Complementary region of DNA
- (e) Genomic DNA template
- (f) Nucleotides provided
- (g) Primers
- (h) Thermostable DNA polymerase (from *Thermus aquaticus*)
- (i) Denaturation of dsDNA