



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

WORK SHEET – 35

Class: XII

Sub: Biological Science

Date: 03.08.2020

Topic: Ch 6 (part 4) Experiments of Griffith and Hershey and Chase to prove DNA is the genetic material

F.M. : 15

Choose the correct option:

(1x15=15)

- The following is the criteria to be fulfilled to be the genetic material :-
a) Storage of information b) Replication c) Stability d) All of these
Answer : All of these (d)
- The property of DNA as a genetic material where gradual modification arise due to mutations and recombination is called :-
a) Synthesis of proteins b) Variability c) Stability d) Replication
Answer : Variability (b)
- _____ isolated nuclein from nuclei of WBCs in 1869.
a) Sutton b) Morgan c) Meischer d) None of these
Answer : Meischer (c)
- Frederick Griffith proved DNA is the genetic material in the year :-
a) 1949 b) 1928 c) 1952 d) 1978
Answer : 1928 (b)
- Steeptococcal strains used by Griffith his experiments are :-
a) S III and R II type b) R III and S II type c) R III and S III type d) R II and SII type
Answer : S III and R II type (a)
- Smooth strains were virulent because of the presence of :-
a) Stable DNA b) Capsule c) Protein cap d) All of these
Answer : Capsule (b)
- When Griffith injected R II (non-virulent) bacteria in mice. The mice :-
a) Remained healthy b) Survived for sometime and later died c) Died immediately d) None of these
Answer : Remained healthy (a)
- The heat killed S III strains changed the R II strains to smooth strains. This phenomenon is known as :-
a) Transforming principle b) Bacterial transformation c) Griffith's effect d) All of these
Answer : All of these (d)

9. The biochemical nature of Transforming principle was proved :-
a) Griffith b) Hershey Chase c) Avery, MacLeod, McCarty d) Sutton
Answer : Avery, MacLeod, McCarty (c)
10. When the DNA extract was treated with _____ enzyme the transforming property of extract was lost.
a) RNAase b) DNAase c) Protease d) All of these
Answer : DNAase (b)
11. Hershey and Chase conducted the experiments on _____ phages.
a) T2 b) T4 c) T3 d) T1
Answer : T2 (a)
12. The bacteriophage which were grown in S^{35} medium, the radioactivity was seen in :-
a) DNA b) Protein coat c) Entire phage d) All of these
Answer : Protein coat (b)
13. The T2 phages which were grown in radioactive phosphorous showed radioactivity in :-
a) Protein coat b) DNA c) Protein coat and DNA d) Neither DNA and protein coat
Answer : DNA (b)
14. The phages which had radio labeled DNA after centrifugation showed radioactivity :-
a) In the bacterial cell b) Supernatant c) Both (a) and (b) d) in new phage generation
Answer : In the bacterial cell (a)
15. Hershey and chase proved DNA as the genetic material in the year :-
a) 1949 b) 1913 c) 1952 d) 1960
Answer : 1952 (c)

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