

School Of Excellence Secondary School 2016 A.Y

Biology Grade 12th Work Sheet

I. Choose the correct answer from the given alternatives

- In which stage of wastewater treatment, methanogenic microbes are the most significant?
A. Biological oxidation
B. Sludge digestion
C. primary treatment
D. secondary treatment
- A process using microbes to convert toxic industrial wastes to less toxic or non – toxic compound is
A. Bioconversion
B. Bioremediation
C. precipitation
D. combustion
- Which of the following is a non – biodegradable waste?
A. paper
B. leaves
C. food wastes
D. plastic
- Which among the following is a non – renewable resource?
A. Natural gas
B. biomass
C. wind energy
D. solar energy
- What is a transgenic organism?
A. Organism with a foreign gene inserted
B. Organism without genes
C. Organism with mutated genes
D. Organism with a single gene
- What is the purpose of polymerase chain Reaction (PcR)?
A. DNA – replication
B. Protein synthesis
C. Lipid breakdown
D. cell division
- The manipulation of organisms of their parts to produce
a. Useful products describes
A. Genetics
B. Biotechnology
C. Recombinant technology
D. Heredity
- In the production of leavened bread, the following is used
A. Bacterium
B. Rhizopus
C. Yeast
D. Mildew
- Which discipline of biology concerned with collection, storage and analysis of biological data, mainly DNA and protein sequences?
A. Molecular biology
B. Bioinformatics
C. cell biology
D. Biotechnology
- The deliberate use of micro – organisms to extract metal ores from extremely low grade ores is known as
A. Digestion
B. fermentation
C. bioleaching
D. biodegradation
- The organisms used to prepare single – cell protein /SCP/ include
A. Cyan bacteria
B. yeasts and filamentous fungi
C. Bacteria
D. all of the them
- What tools are used in forensic science?
A. Thermo cyclers/thermal cyclers
B. Microscopes
C. Fume hoods
D. Chromatographs and spectrometers
E. All of these
- Which biological application is important for maintaining food security?
A. Biotechnological application
B. Bio mining
C. Bioremediation
D. Bio energy
- Prolonged undernourishment can increases
A. Stunting – too short for age
B. Susceptibility to illness
C. slow cognitive development
D. all of the above
- Which one of the following commercial uses of enzymes is correctly paired with its functions?
A. Amylases – clarification of fruits juice
B. Lipases – washing powders for removal of fatty stains
C. Pectinases – tenderizing meat

D. Proteases - production of glucose from starch

II. Match column "A" with column "B"

A	B
_____ 1. The commonest organisms used to produce enzymes	A. Beauveria bassiana
_____ 2. Used for control of the Colorado potato beetle	B. A spergillus or Bacillus
_____ 3. Inserted in cotton crop in order for development of certain protein in it.	C. Biohydrometallurgy
_____ 4. The use of microbes to extract metals from ores	D. Bacillus thuringiensis
_____ 5. Used for monitoring food quality	E. Biosensor
_____ 6. Actinomycetes	F. Handheld aflatoxin detection system
_____ 7. Mycoprotein	G. The most prolific sources of antibiotics
_____ 8. Used to measure specific components in beer, to monitor pollutants and to detect flavor compounds in food	H. Fusarium venenatum
_____ 9. The first vitamin to be produced during a fermentation process by using bacteria	I. Vitamin 'C'
_____ 10. The process of breeding staple crops to have higher levels of essential nutrients either through selective breeding/genetic modification	J. Vitamin 'B'
_____ 11. A method carried out by adding a small amount of tormented products into fresh ingredient and then is left to be fermented in room temperature	K. Biofortification
	L. Back slopping

III. Answer the following questions

1. What is biological warfare? Why the use of biological warfare is not allowed?
2. Describe the application of biology in different areas of medicine
3. What are the different communities of anaerobic microbes involved in biogas production?
4. Define the following terms
 - a. Gene therapy
 - b. Gene cloning
 - c. Recombinant DNA technology
 - d. Tissue culture
5. What is forensic science? Explain its significances