

KATHMANDU UNIVERSITY
End Semester Examination
August, 2018

Marks scored:

Level : B. Tech.

Year : I

Course : BIOT 101

Semester: II

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date **AUG: 14 2018**

SECTION "A"

[10 Q × 0.5 =5 marks]

Choose and tick [√] the most appropriate answer.

- Which of the following is a primary database?
 GenBank Pfam BLOCKS Expasy
- The basic Ig unit is composed of
 2 identical heavy and 2 identical light chains
 2 identical heavy and 2 different light chains
 2 different heavy and 2 identical light chains
 2 different heavy and 2 different light chains
- Nucleoids are found in all
 plant cells
 bacterial cells
 bacterial cells, blue green algae
 plant cells, bacterial cells, blue green algae
- One of the following ratio is constant in DNA of different species.
 A+T/C+G A+G/T+C A+C/U+G A+U/C+G
- Bt* transgenic crops are designed to
 make crops cold resistant provide resistance to insects
 make crops heat resistant improve nutritional value of crops
- The "sticky ends" generated by restriction enzymes allow
 pieces of DNA from different sources to hybridize to each other and to be joined together
 easy identification of plasmids which carry an insert
 replication of transfer RNA within the bacterial cell
 insertion of centromeres into ribosomes lacking them
- Ananda Chakrabarty received the first U.S. patent for a GM organism. This organism was
 a transgenic mouse expressing the growth hormone gene
 cloned *E. coli*
 Dolly the cloned sheep
 Pseudomonas putida engineered to degrade petroleum
- Which bioremediation approach involves using plants to degrade pollutants?
 Biopile Phytoremediation Composting Land farming

9. If you convert heart cell into a stem cell through genetic reprogramming, the new stem cells thus formed will be
 unipotent multipotent pluripotent totipotent
10. Hydrolysis of maltose yields
 glucose and Fructose glucose and Galactose
 fructose only glucose only

SECTION "B"

[5Q. × 1 = 5 marks]

Fill in the blanks:

11. Yogurt is the product of.....a slow decomposition process of organic substances induced by microorganisms or enzymes.
12.copy of tumor suppressor gene must be inactivated by mutation in order to contribute to cancer development.
13. If the sequence of bases in DNA is ATTCGATG then the sequence of bases in its transcription will be.....
14. Fungal cells are composed of.....
15. In Sanger method of sequencing, chain termination occurs due to a modified nucleotide called as.....

SECTION "C"

[10Q. × 1=10 marks]

Define in *one* sentence:

16. Fermentation:
17. Prions:
18. Metastasis:
19. Superbug:
20. Polymerase Chain Reaction:
21. Cryopreservation:
22. Transcriptomics:
23. Saccharification:
24. Pribnow box:
25. Phytovolatilization: