



BIOLOGY

BOOKS - SARAS PUBLICATION

APPLICATION OF BIOTECHNOLOGY

Exercise

1. The first clinical gene therapy was done for the treatment of

A. AIDS

B. Cancer

C. Cystic fibrosis

D. SCID

Answer:



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2. Dolly, the sheep was obtained by a technique known as

A. Cloning by gene transfer

B. Cloning without the help of gametes

C. Cloning by tissue culture of somatic cells

D. Cloning by nuclear transfer

Answer:



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3. The amino acid content of insulin is

A. Chain A has 12 and Chain B has 13 amino acids

B. Chain A has 21 and Chain B has 30 amino acids

C. Chain A has 20 and Chain B has 30 amino acids

D. Chain A has 12 and Chain B has 20 amino acids

Answer:



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4. What was the first pharmaceutical product of recombinant DNA technology administered to humans?

- A. Somatropin
- B. DNA vaccines
- C. Humulin
- D. Gene therapy

Answer:



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5. Which one the following cannot be detected by ELISA?

- A. Serum antibody concentration
- B. Specific antigens
- C. DNA of interest
- D. Human chorionic gandotropin

Answer:



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6. What is genetically engineered insulin ?



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7. Explain how "Rosie" is different from a normal cow.



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8. Gene therapy is an attempt to correct a Genetic defect by providing a normal gene into the individual. By this the function can be restored. An alternate method would be to provide gene product known as enzyme replacement therapy, which would also restore the function. Which in your opinion is a better option? Give reasons for your answer.



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9. What are DNA vaccines ?



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10. Can RNA be amplified by PCR? Give reason for your answer.



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11. Where do genetically modified organisms play a positive role in developed and

developing countries?



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12. What are stem cells? Explain their role in the field of medicine.



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13. What are stem cells? Explain their role in the field of medicine.



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14. Explain why cloning of Dolly, the sheep was such a major scientific breakthrough ?



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15. What are transgenic animals?



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16. Give some example for transgenic animals.



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17. How does recombinant DNA technology help in treating haemophilia patients?



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18. Write a short note on interferons.



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19. Expand ELISA.



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20. Name the different ELISA methods.



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21. How does an ELISA technique work?



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22. Differentiate pluripotency and multipotency.



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23. Comment on SCID.



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24. Why is E.coli not preferred for the production of recombinant interferons?



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25. Given below are the food products obtained by microbial action Name the respective organism responsible for their production (a) Swiss Cheese (b) Bread dough



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