BIOLOGY

BOOKS - JMD BIOLOGY (PUNJABI ENGLISH)

Biotechnology : Principle and process

Exercise

1. Introduction of genetically modified food is not desirable because

A. It will affect economy of developing countries

B. The products are less tasty

C. They are costly

D. There is danger of entry of toxins and virus in foood.

Answer: D

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2. Which generally engineered microbe was used for nitrogen fixation by incorporating nif gene in cereals

A. Rhizobium meliloti

B. Bacillus thuringiensis

C. Pseudomonas putidda

D. Pseudomonas flouorescence

Answer: A

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3. Endonuclease is employed in

A. Transcription

B. Translation

C. Genetic engineering

D. DNA replication

Answer: C

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4. Recombiant DNA or rDNA technology was discovered by

A. Khorana

B. Bateson and de Vries

C. Sutton and Avery

D. Watson

Answer: B

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5. In genetic engineering which is used for transfer of genes from one cell to another?

A. Vector

B. Probe

C. Plasmid

D. Virus

Answer: A

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6. Identify the vector sutable for cloning lon DNA fragments.

A. Phage vector

B. Bacterial plasmid

C. Yeast plasmid

D. Cosmids

Answer: D

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7. Introduction of foreign gene for improving genotype is

A. Tissue culture

B. Genetic engineering

C. Biotechnology

D. Vernalisation

Answer: B

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8. The enzymes which are commonly used in genetic engineering are

A. Restriction endonucleases and polymerase

B. Endonuclease and ligase

C. Restriction endonucleases and ligase

D. Ligase and polymerase

Answer: C

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9. Genetic engineering is

A. Making artificial genes

B. Hybridisation of DNA

C. Making artificial limbs and diagnostic instruments

D. Production of alchol by using microorganisms

Answer: B

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10. DNA segment cleaved by EcoRI is

A. ATTCGA TAAGCT

B. GAATTC CTTAAG

C. GCTTAA CGAATT

D. GTTCAA CAAGTT

Answer: B

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11. Extrachromosomal DNA used as vector in gene cloning is

A. Transposon

B. Intron

C. Exon

D. Plasmid

Answer: D

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12. Restriction endonucleases are useful in

A. Breaking DNA at specific sites

B. Creating sticky ends

C. Both A and B

D. Crossing over

Answer: C

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13. Plasmids are used as vectors in genetic engineering because of their

A. Resistance to antibiotics

B. Resistance to restriction enzymes

C. Ability to carry foreign genes

D. Ability to cause infection in host

Answer: C

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14. The most extensively used bacteria in genetic engineering is

A. Bacillus

B. Clostridium

C. Escericha

D. Salmonella

Answer: C

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15. Restriction endonucleases used widely in RDT are obtained from

A. Plasmids

B. Bacterial cells

C. Bacteriophages

D. All prokaryotic cells

Answer: B

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16. DNA is generally methylated at

A. A-base

B. G-base

C. T-base

D. C-base

Answer: D

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17. Which one is not a process of recombinant DNA technology ?

A. Isolation of genetic material

B. Chromatography

C. Cutting of DNA at specific location

D. Amplification of gene of interest using PCR

Answer: B

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18. Polymerase chain reaction is useful in

A. DNA synthesis

B. DNA amplification

C. Protein synthesis

D. Amino acid synthesis

Answer: B

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19. Fragments of DNA formed after treatment with endonucleases are separeted by the technique

A. Polymerase chain reaction

B. Southern blotting

C. Colony hybridisation

D. Electrophoresis

Answer: D

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20. In genetic engineering, DNA fragments are joined through

A. Ligase

B. Polymerase

C. Helicase

D. Gyrase

Answer: A

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21. Electroporation is

A. Making transient pores in cell membrane to introduce gene constructs

B. Fast passage of nutrients through phloem sieve pores by electric stimulation

C. Opening of stomata by artificial light during night

D. Purification of saline water with the help of membrane system.

Answer: A

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22. Gene library or DNA library has collection of

A. Packing of donor DNA in a collection of vectors

B. A collection of gene vectors

C. Collection of organism for extracting DNA

D. A collection of literature about DNA.

Answer: A

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23. In gel electrophoresis, differential mobility of DNA depends upon

A. Helical nature of DNA

B. Double stranded nature of DNA

C. Charge and size of DNA

D. Hydrogen bonding between bases.

Answer: C

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24. Two microbes found to be very useful in genetic engineering are

A. Escherichia coli and Agrobacterium

B. Vibrio cholerae and a tailed bacteriophage

C. Diplococus sp. and Pseudomonas sp.

D. Crown gall bacterium and Caenorhabditis elegans

Answer: A

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25. When a process is elevated to large scale, the stage between laboratory scale and manufacuring unit is known as

A. Bioeactor scale

B. Pilot plant scale

C. Support growth system

D. Suspended growth system

Answer: B

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26. Fill in the blanks

Asexual reproduction _____ the genetic information.

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27. Fill in the blanks

The cutting of DNA at _____ location by RE.

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28. Fill in the blanks

identification of DNA with desirable gene is _____.

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29. Fill in the blanks

_____removes nucleotides from the ends of the DNA.

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30. Fill in the blanks

EcoRI cuts in between _____.

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31. Fill in the blanks

Unpaired base pair of DNA end is called _____.

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32. Fill in the blanks

_____ dissolves bacterial cell wall.

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33. Fill in the blanks

_____ isolated from a bacterium.

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34. Fill in the blanks

_____ are used for plants.

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35. Fill in the blanks

Same RE is used for host as well as _____.

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36. True and False Type Questions

Strict quality control testing for each product is must.

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37. True and False Type Questions

Thermolabile DNA polymerase is Taq polymerase.

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38. True and False Type Questions

Lipase dissolved cell and nuclear membrane.

39. True and False Type Questions

Potassium is used for the transformation ofrDNA in bacteria.

40. True and False Type Questions

Retroviruses in animals have the ability to transform normal cell into caancerous cell.

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41. True and False Type Questions

pBR322 is a natural cloning vector.

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42. True and False Type Questions

Blunt ends have paired base pair.

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43. True and False Type Questions

Arbar, 1963 discovered EcoRI from Bacillus coli.

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44. True and False Type Questions

Chromosomal DNA possesses vital genes.

45. True and False Type Questions

Plasmid DNA act as vector.