BIOLOGY

BOOKS - PRADEEP BIOLOGY (HINGLISH)

BIOTECHNOLOGY AND ITS APPLICATIONS

Curiosity Questions

1. It it possible to produce animals with bacterial genes?

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2. How genetic engineering helps to replace the defective genes with the normal genes ?

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3. Has our government got any success in the battle against biopiracy?

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Notable Question

1. Are the edible products of transgenic crops (or Genetically modified crops) safe for human consumption?

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2. Can a baby have three persons' genes?

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Ncert Exercises With Answers

1. Crystals of Bt toxin produced by some bacteria do not kill the bacteria themselves because

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2. What are transgenic bacteria ? Illustrate using any one example

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3. Compare and contrast the advantages and disadvantages of production of genetically modified crops.

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4. What are Cry proteins? Name an organism that produces it. How has man exploited this protein to his benefit?

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5. What is gene therapy? Illustrate using the example of adenosine deaminase (ADA) deficiency.

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6. Diagrammatically represent the experimental steps in cloning and expressing a human gene (say the gene for growth hormone) into a bacterium like E. coli?

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7. Does our blood have proteases and nucleases?

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8. Consult internet and find out how to make orally active protein pharmaceutical. What is the major problem to be encountered?

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Ncert Exercises Additional Question Very Short Answer Question

1. Pick the correct option from among those provided

(i) biopoiracy is realted to which of the

following

(a) Traditional kanowledge ltbvrgt (b) Biomeolicules and regareding bioresources genses isolated form bioresouces

(C) bioresources

(d) all of the above

(ii) Which of hte follwing is used in biovour

(a) a pathogen

(b) toxin form a pathogen

(C) a delivery system for the bioweapon agen

(d) all of the above

(iii)Which of the following combinations of risk are associtated wiht genetically modified

food?

(iv) a trangence expression can achive whihc of the follwoing ?

(a) prevent expression of a native gene

(b) moidify an existing biosynthetic pathway

(c) produce a protein that itself produces the phenotype of interst

(d) all of hte above

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2. Genetically engineered human insulin is called

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3. How many amino acids are arranged in two chains of insulin?

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4. Name the primary steroid which gives rise to male and female sex hormones

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5. Who observed that the fungus rhizopus stoleonifer cold bring abot hydroxylation of steriids

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6. Name the first organic acid produced by microbial fermentation.

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7. Name the two vitamins produced by microbial fermentation.

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8. Which is the most efective application of mionoclonal antibodies

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9. What are hybridomas

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10. Name the classes of organisms that produce antibiotics.

Watch Video Solution

11. What are antibiotics?

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12. Name three enzymes of industrial importance.

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13. Name any five industrial products of yeast fermentation

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14. Name the two types of fermentatioin processess

Watch Video Solution

15. Define Biotechnology briefly.

Watch Video Solution

16. Name some fut ur e transgenci crops

Watch Video Solution

17. Name some plant based vaccines

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18. Name the Indian variety of rice patented by an American Company.

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19. A multinational company outside tried to sell new varieties of turmeric without proper patent rights. What is such an act referred to ?

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20. Name a molecular diagnostic technique to detect the presence of a pathogen in its early stage of infection ?

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21. How was insulin obtained before the adven t of rDNA technoloty? What were the problems encountered?

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22. Can a disease be detected before its symtoms appear? Explain the principle involved.

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23. Give the full form of ELISA which disease can be detected using it ?

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24. Name the first transgenic cow. Which gene was introduced in this cow?

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25. Crystals of Bt toxin produced by some bacteria do not kill the bacteria themselves because

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26. Bt coton ha sdeveloped resistance against

Watch Video Solution

27. Name any two diseases the himgiri variety of wheat is restant to

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28. How ar stem cells diffeernt form other cells of the body

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29. Give atleast two accessible autologous sources of adult stem cells in human beings

Watch Video Solution

30. What is biopiracy?

Watch Video Solution

31. State the cause of adenosine deaminase enzyme deficiency.

Watch Video Solution

32. Suggest any two possible tratments that can be given to a patient exhibiting adenosine deaminase deficiency.

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33. What is biopiracy?

Watch Video Solution

34. What are Cry genes ? In which organism are they present?

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35. Name the specific type of gene that is incorporated in a cotton plant to protect the

plant against cotton boll worm infestation.

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36. Bt toxins are released as inactive crystals in the bacterial body what happens to it in the cotton boll workx body that it kills the boll worm?

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37. Mention the chemical change proinsulin undergoes to be able to act as mature insulin

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Ncert Exercises Additional Question Short Answer Question

1. Name a few important products of biotechnology

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2. What are the areas which have been responsible for the recent advances in biotechnology?

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3. What are vaccines ?

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4. Which two patents on india biological resurces have been revoked ?

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5. Why would biopiracy affect india most ?

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6. What is legally wrong in the us patent law?

Watch Video Solution

7. Who is vandana shiva

Watch Video Solution

8. Mention the common items o biopiracy

Watch Video Solution

9. When does the Bt cotton was commerically planted

Watch Video Solution

10. Mention two objectives of-setting up GEAC by our Government.

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11. Nematode specific genes are introduced into the tobacco plants using agrobacterium vector to develop resistance in tobacco plants

against nematodes explain the events that occur in tobacco plant to develop resistance

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12. Why is the introduction of genetically engineered lymphocytes in to ADA deficiency patient is not a permanent cure? Suggest a possible permanent cure

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13. (a) write name of the first transgenic crop in India (B) insulin is extracted from which microorganism?

(C) which enzyme is most commonly used for the crop improvement in genetic engineering?

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14. Gene expression can be controlled with the help of RNA. Explain the method with an example.

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15. Highlight any four areas where genetic modification of plants has been useful.

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16. PCR is a useful tool for early diagnosis of an infectious disease. Elaborate.

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17. How is Rosi considered diffeent form a normal cor?

Watch Video Solution

18. What is biopiracy?

Watch Video Solution

19. What is gene therapy? Illustrate using the example of adenosine deaminase (ADA) deficiency.

Watch Video Solution

20. Write the function of adenosine deaminase enzyme. State the cause of ADA deficiency in humans. Mention a possible permanent cure for a ADA deficiency patient.

Watch Video Solution

21. (a) Name the deficiency for which first clinical gene therapy was given.

(b) Mention the cause of and one cure for this deficiency.

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22. What is bio-piracy? State the initiative taken by the Indian Parliament against it

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23. Why does the Bt toxin not kill the bacterium that produces it but kills the insect

that ingests it?

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24. What is gene therapy? Name the first clinical case where it was used.

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25. How many types of stem cell exist in mammals ? Give one explain of each type.

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26. Write any two ways stem cells can be beneficial to human beings

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Ncert Exercises Additional Question Short Answer Question

1. Define :

(A) Transgene

(b) Transgenic organism

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2. Write a note on utility of transgenic crop plants

Watch Video Solution

3. How are the transgenic animals useful to us?

Watch Video Solution

4. What are geneticvally modified organisms ?

Watch Video Solution

5. BT COTTON

Watch Video Solution

6. Write a brief account of genetically engineered insulin

Watch Video Solution

7. Plasmid is a boon to biotechnology justify this statement quoting the production of human insulin as an example

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8. Name the source and the types of cry gens isolated form it for incorporation into crops.

How these genes brought beneficial changes in the genetically modified crops

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9. How does RNA interference help in developing resistance in tobacco plant against nematode in infection?

Watch Video Solution

10. Name the insect pest that is killed by the products of cryIAC gene. Explain how the gene makes the plant resistant to the insect pest.

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11. (a) Define cloning what are its benefits?

(b) Describe transgenics write briefly about a transgeneic crop that has been introduced in india

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12. Fill the blanks

(a) single cell protein (SCP) provied a valuable .....rich supplement in .....diet

(b) fruit softening in tomato is promoted by the enzyme .....which degrades pectin

(C) A soil bacterium .....produces a crystal (cry) protein

(d)Ti plasmid is found in.....

(E) pentadipandra brazzeana a awest aftican plnant produces a protein called

.....which is approximately 2000 times as .....s sugar

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13. Make corrections wherver you find msitake in spellings /words in the following paragraph / senctences

(A) The possible offences against bioweapons include the sue of respriator or gas mart vaccation admisntiration of appropriate antibiotics and decontamination

(b) sustainable agriculature would primaarily use non renewable resurces would cause the maximum pollution and mantain the optimum yield level

(C) production of olygalcturonase was activated in the transgenic tomto variety flavr savr therfore fruit of this tomato varietyu remain freash and retain the flavour much longer than do the fruits of normal tomato varities

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14. Define transgenic animals. Explain in detail any four areas where they can be utilized.

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15. List the advantages of recombinant insulin.

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16. Gene expression can be controlled with the help of RNA. Explain the method with an example.

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17. Bt cotton is resistant to pest, such as lepidopteran, dipterans and coleopterants. Is Bt cotton also resistant to other pests as well?

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18. What are the sues o enetically modified plants ?

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19. (a) why are t aansgeneic andimlas so called?

(b) Explain the role of ransgenic animlas in (i) vaccine safety and (ii) biological products with the hepl fo an example each

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20. How did the process of RNA interference help to control the nematode form infecting roots of tobacco plants ? Explain

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21. What are Methanogens? Name the animals they are present in and the role they play there.

Watch Video Solution

22. How embryonic stem cells can be cultured ? Explain

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23. Recombinant DNA-technology is of great importance in the field medicine. With the help of a flow chart, show how this technology has been used in preparing genetically engineered human insulins .

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24. Describe any three potential applications of genetically modified plants .

Watch Video Solution

25. How did an ameican company eli lilly use the knowledge of r DNA technology ot produce human insulin?

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26. Explain enzyme-replacement therapy to treat adenosine deaminase deficiency Mention two disadvantages of this procedure.

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27. Why do lepidoplerans die when they feed on Bt cotton plant? Explain how does it happen.

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28. Explain the various steps involved in the productin of artifical insulin

Watch Video Solution

29. How has the use of agrobacterium as vectors helped in controlling meloidegyne icongnitia infestation in tabacco plants ? Explain in correct sequecne

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30. (a) What are transgenic animals ?

(b) Name the transgenic animal having the largest number amongst all the existing transgenic animals.

(c) Mention any three purposes for which these animals are produced.

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31. The indian government refuted the attempt by a multinationals company (MNC) to patent the antiseptic property of curcumin derived from Turmeric analyze he unethical practical adopted by the MNC state its implication and suggest provisions in the Indian law to prevent such malpractices

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32. Explain how Eli Lilly, an American company produced insulin by recombinant DNA technology.

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Ncert Exercises Additional Question Long Answer Question

1. What are transgenic animals. Give an example.

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2. Elaborate as to how biotechnology can be helpful in achieving sustainable agriculture

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3. Bring out the salient feature through which biotechnology can lead to higher food production

Watch Video Solution

4. Give a brief account fo the appication of biotechnology in therapeutics

Watch Video Solution

5. Write short notes on (a) biopiracy (b) biioplatent

 Watch Video Solution

6. Write an account of practical applications of genetic engineering

 Watch Video Solution

7. Explain the steps involved in the production of genetically engineered insulin .

Watch Video Solution

8. How is a transgenic tobacco plant protected against meloidegyne incognitia

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9. (a) Name the sruce of taq polymerase explain the advantage of its use in biotechnology

(b) Expand the name of the enzyme ADA why is this enzyme essential in human body ? Suggest a gene therapy for deficiency

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10. (a) what are four main objectives of genetically modified crop plants?

(b) How Bt toxin kills insects

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11. You have identified a useful gne in bacteria. Make a flow chart of the steps that you would follow to trasnfer this gene to a plant.

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12. Highlight five areas where biotechnology has influenced our lives.

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13. What is gene thereapy ? Illustrate using the example of ADA deficiency

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Ncert Exercises Analytical Question With Answers

1. Expand GMO. How is it different from a hybrid?

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2. Distinguish between cry and cry

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3. Can you suggest a method to remove oil (hydrocarbon) from seeds based on your

understanding of rDNA technology and chemistry of oil?

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4. Why do children cured by enzyme-replacement therapy for adenosine deaminase deficiency need periodic treatment?

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5. What was the speciality of the milk produced by the transgenic cow Rosie ?

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6. Find out from internet what is golden rice.

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7. Mention two objectives of setting up GEAC by our government

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8. What is the difference between conventional agriculture practices and modern agriculture practices

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9. How did Eli Lilly synthesis the human insulin ? Mention one difference between this insulin and the one produced by the human pancreas.

Watch Video Solution

10. Describe the gene thereapy precedure for an ADA deficeinet patient

Watch Video Solution

11. Why is porinsulin so called ? How is insulin differnet form it?

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12. Name the following :

(i) A tansgenci organism gives milk which has huge quantites of human protein

(ii) A transgenic fruit 'acts as edible vaccine which protects children against diarrhoea

(iii) A transgenic fruit has capability of producing ethylene 10% less as compared to normal slowing down the process of ripening

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13. Explain how golden ric ecan prevent child blindness

Watch Video Solution

14. Explain how tansgenic animlas serve as model for human diseases?

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15. In a medical case it was detected that a child is suffereing form a genetic disroder due to the deletion to the gene. What remedial measure do you suggest for the treatment of such disorder ?

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16. Correct the following statement giving reasons

The mature insulin molicule consists of three short polypeptide chains

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17. How do the improvement of crop plants through gneentic engineering more advantageous than conventional breeeding ?

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18. Do you thin animla organs will solve transplant problems ?

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19. Explain how polymerase chian reaction (PCR) technique is helpful indetecting bacterial and viral disesases when symptoms of the disease are not yet visible ? Give two examples

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20. Name the pest that destroys the cotton bolls. Explain the role of bacillus thuringensis in protecting the cotton drop against the pest to increase the yields .

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Ncert Exercises Practice Question I Multiple Choice Question

1. Insect resistance transgenic cotton has been produced by insecting a piece by DNA from

A. an insect

B. a bacterium

C. a wild realtive of cotton

D. a virus

Answer: B

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2. Hybridoma technology has been successfully used in:

A. production of somatic hybrids

B. synthesis of monoclonal antibodies

C. synthesis of haemoglobin

D. production of alcohol in bulk

Answer: B

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3. During gene cloning which is called 'gene taxi'

A. vaccine

B. plasmid

C. bacterium

D. protozoa

Answer: B

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4. Name of the drug used in cancer treatment produced by using biotechnology:

A. terramycin

B. hgh

C. insulin

D. tsh

Answer: E

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5. Cultivation of Bt Cotton has been much in the news . The prefix "Bt" means

A. barium treated cotton seeds

B. bigger therad variety of cotton with better t ensile strength

C. produced by biotechnology using restiction enzymes and ligases

D. carrying an endotoxin gene from acillus thuringiensis

Answer: D

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6. The first antibiotic was discovered by

A. louis passteiu

B. r.koch

C. w fleming

D. a fleming

Answer: D

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7. In transgenics, the expression of transgene in the target tissue is known by

A. treansgene

B. apromoter

C. reporter

D. enhacer

Answer: B

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8. Terminator gene

A. help in terminatin flowering

B. help in terminating seed germination

C. used in hybridisation

D. none of these

Answer: B

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9. First biochemical to be produced comercially by microbial cloning and genetic engineering is

A. human insulin

B. penicillin

C. interferons

D. fertility factor

Answer: A

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10. Golden rice is a transgenic crop of the future with the following improved trait:

A. insect resistance

B. high lysine (essintial amino acid) content

C. high protein cotent

D. high vitamin a content

Answer: D

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11. Bacillus thuringiensis (Bt) strains have been used for designing novel

A. biofertilizers

B. bio metallurgical techniques

C. bio mineraliztion processes

D. bio insecticidal plants

Answer: D

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12. Which of the following is a correct statement

A. Bt in Bt cotton indicates that it is a genetically modified organism produced through biotechnology

B. somatic hybridization involves fusion of two coplete plant cells carrying desired genes

C. the anticoagulant hirudin is being produced form transgenic brassica napus seed

D. flaver savr variety of tomato has enhanced the producton of ethylene which improve its taste

Answer: C

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13. Which bateria is used as biopesticide first on the commerical scale in the world

A. Bacillus thuringiensis

B. e coli

C. pseudomonas aeruginosa

D. agrobacterium tumefaciens

Answer: A

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14. Gene recombinant technology is used for :

A. vectorless gene transfer in to target cell

B. vetor based gene transfer in to target cell

C. direct transfer of DNA protein complex

D. liposome base direct gene transfer in to target cell

Answer: B

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15. Transfer of DNA bands from an agrose gel to a nitrocellulose or nylon membrane is referred to as

OR

DNA finger printing is done by a technique called

A. western transfer

B. northen transfer

C. eastern transfer

D. gene transfer

Answer: E

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16. Hhirudin is

A. a protein porduced by hordeum hordeumvulgare wh ihc is reich in lysine

B. a troxic mllecule isolated from gossypium hirsutum which reduces human fertility

C. a protein prodcued from transgenic brassica nampus which prevents blood clotting

D. an antibiotic produced by a genetically engieered bacterium esherichia coli

Answer: C

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17. Golden rice is a promising transgenic crop.

When released for cultivation , it will help in:

A. production a petrol like fuel from rice

B. alleviation of vitamin a

C. pest resistance

D. heribcide tolerance

Answer: B

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18. Genetically engineered microorganism used successfully in bioremediation of oil spills is:

A. trichoderma

B. xanthomanas

C. bacillus

D. pseudomonas

Answer: D

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19. In cloning of cattle a fertilised egg is taken out of the mother's womb and

A. in the eight cell stage cells are separated and coutured until small embroyos are formed which are implanted into thewomb of other cows

B. in the eight cell stage the individual cells are seprted under electricla fiedlf for further development in culture media

C. form theis up to eight indential twins can be produced

D. the egg is divided into 4 pairs of cells which are implanted into the womb of other cows

Answer: A

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20. The problem of blindness in poor countries can be taken care of by using the following:

A. golden rice

B. wheat

C. gram

D. pea

Answer: A

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21. Match list I with List II and select the correct option

List I	List II
(a) *Bacillus thuringiensis*	1. Production of chitinases
(b) *Rhizobium meliloti*	2. Scavenging of oil spills
(c) *Escherichia coli*	3. Incorporation of 'nif' gene
(d) *Pseudomonas putida*	4. Production of Bt toxin
(e) *Trichoderma*	5. Production of human insulin

A. a-2,b-4,c-1,d-5,e-3

B. a-2,b-4,c-5,d-1,e-3

C. a-4,b-3,c-5,d-2,e-3

D. a-3,b-4,c-5,d-1,e-2

Answer: C

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22. Human unsulin is being commerically prodcued form a transgenci species of

A. Rhizobium

B. saccharomyces

C. escherichia

D. mycobacterium

Answer: C

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23. A transgenic food crop which may help in solving the problem of night blindness in developing countries is

A. bt soybean

B. goden rice

C. flavrasvr tomatoes

D. starlink maize

Answer: B

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24. Main objective of production of herbicide resistant GM crops is to

A. encourage eco friendly herbicides

B. reduce heribicide accumulation in food articles for health safety

C. eliminate weeds from the field wihtout the use of manula labour

D. eliminate weeds from t he field without the use of heribicide

Answer: B

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25. Genetically engineered bacteria are being employed for production of

A. thyroxine

B. human insulin

C. cortisol

D. epinephrine

Answer: B

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26. Isolation of Bt-gene from bacterium (Bacillus thuringiensis) was taken up in the year:

A. 1977

B. 1980

C. 1997

D. 1990

Answer: B

27. Which one of the following is commonly used in transfer of foreign DNA into crop plants ?

A. meloidogyne incognita

B. agrobactreium tumefaciens

C. penicillium expansum

D. trichoderma harizanum

Answer: B

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28. What is true about Bt toxin ?

A. bt toxin exists as active toxin in the bacillus

B. the activated toxin enters the ovaries of the pest ot sterilise it and thus prevent its multiplication

C. the concerned bacillus has nait toxins

D. the inactive protoxin gets converted into active form in the insect gut

Answer: D

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29. Transgenic plants are the ones:

A. generated by introducing foreign DNA into a cell

B. produced after protoplast fusion in artificall medium

C. grown in artificial medium after bybridiztion in the field

D. produced by a somatic embroyo in artifical medium

Answer: A

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30. The bacterium Bacillus thuringiensis is widely used in contemporary biology as

Or

Thurioside is

A. Insecticide

B. Agent for production of dairy products

sources of industrial enzyme

C. Indicator of water pollution

D. Source of industrial enzyme

Answer: A

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31. Golden rice is

A. a variety of rice grown along the yellow river in chinda

B. long stroed rice having yellow colour tint

C. a transgenic rice having gene for β carotene

D. wild varity of rice with yellow coloured grains

Answer: C

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32. In RNAi, genes are silenced using

A. ss DNA

B. ds DNA

C. ds RNA

D. ss RNA

Answer: C

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

A. AIDS

B. Cancer

C. Cystic firbosis

D. SCID (server combined immuno deficeincy resutling form deficiency of ADA)

Answer: D

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34. ADA is an enzyme which is deficient in a genetic disorder SCID. What is the full form of ADA ?

A. adenosine deoxyaninase

B. adenosine deaminase

C. a spartate deaminase

D. arginine deaminase

Answer: B

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35. Silencing of a gene could be achieved through the use of

A. short interfeing RNA (RNAAi)

B. antisense RNA

C. by both

D. none of these

Answer: C

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36. Silencing of mRNA has been used in producing transgenic plants resistant to:

A. bollworms

B. nematodes

C. white rusts

D. bacterial blights

Answer: B

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37. The first clinical gene therapy was given for treating :

A. diabetes mellitus

B. ch icken popx

C. rhenumatoid arthritis

D. adenosine deaminase deficiency

Answer: D

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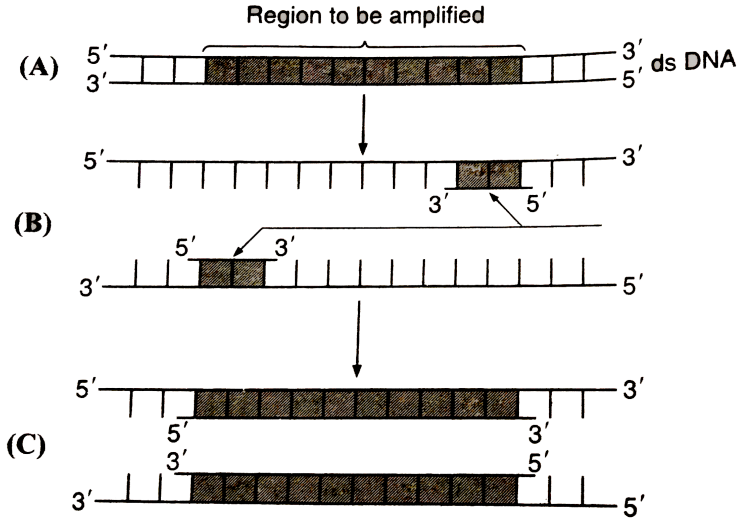
38. The figures below shows three steps (A,B,C) of polymerase chain reaction (PCR). Select the right one



A. B denatureation at a temperatue of about $98^{\circ}C$ separting the t wo DNA strands

B. A denaturation at a temperatue of abut

$50^\circ C$

C. C ext ension tint the presence of heat

stable DNA polymerase

D. A annelaing with two sets of primers

Answer: A

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39. Tobacco plants resistant to a nematode have been developed by the introduction of DNA that produced (in the host cells):

A. both sense and anti sense RNA

B. a particular hormone

C. an antifeedant

D. a toxic protein

Answer: A

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40. Amplification of gene of interest by using DNA polymerase may go upto

A. 0.1 million times

B. 1.0 million times

C. 1.0 billion times

D. 1.0 trillion times

Answer: C

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41. Which of the following Bt crops is being grown in India by the farmers ?

A. cotton

B. brinjal

C. soybean

D. maize

Answer: A

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42. The first human hormone produced by recombinant DNA technology is

A. Insulin

B. estrogen

C. thyrogin

D. progsterone

Answer: A

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43. An analysis of chromosomal DNA using the southern hybridization technique does not use

A. electrophoresis

B. blotting

C. autoradiography

D. PCR

Answer: D

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44. In vitro clonal propagation in plants is characterized by

A. PCR and RAPD

B. northenrn blotting

C. electrophoresis and hplc

D. microsocpy

Answer: D

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45. An alga which can be employed as food for humna being is

A. ultohrix

B. chlorella

C. spirogyra

D. palasiphema

Answer: B

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46. Match t he following and select the correct option

A. (i) (ii) (iii) (iv)

B. (iv) (i) (iii) (ii)

C. (iii) (ii) (iv) (i)

D. (ii) (i) (iv) (iii)

Answer: D

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47. The first clinical gene therapy was given for treating :

A. diabetes mellitus

B. chickenpox

C. rheumatoid arthritis

D. adenosine deaminase deficiency

Answer: D

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48. Which kind of therapy was given in 1990 to a four year old girl with adenosine deaminase (ADA) deficiency?

A. gene threapy

B. chmotherapy

C. immunotherapy

D. radiation therapy

Answer: A

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49. In India organisation responsible for assessing the safety of introducing genetically modified organisms for public use is

A. indian council of medical research (IMCR)

B. council for scientific and industiral research (CSIR)

C. reasearch committee on genetic manipulation (RCGM)

D. genetic engineering appraisal committee (GEAC)

Answer: D

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50. A new variety of rice was patented by a foreign company, though such varieties have been present in india for a long time. This is related to

A. Co -667

B. sharbati sonora

C. lerma rojo

D. basmati

Answer: D

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51. Use of bioresources by multinationals companies and organisation without authorisation from the concerned country and

its people is called the concerned county and its people is called

A. bio infringenment

B. biopiracy

C. biodegrdation

D. bioexploitation

Answer: B

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Ncert Exercises Practice Question Ii Assertion Reason Type Question

1. Assertion Industrial fermentiations are money making ventures

Reason They require a thorough reasech to discover high yilds fo produce at least possible expenses

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: B

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2. Assertion Bread and other such baked products are proous and soft

Reason Both CO_2 and alcohol escape during baking

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A

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3. Assertion. The antibiotics produced by Streptomyces species have found greatest commercial application.

Reason: Some of the important life saving

antibiotics such as penicillia and polymixia-B are produced by streptomyces.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: C

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4. Assertion Insulin is an important life saving drug for diabetic patients

Reason In is now possible to prduce insulin by using recombinant DNA technology

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: B

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5. Assertion; Monoclonal antibodies are ideal for diagnosis of diseases caused by closely related pathogens

Reason Monoclonal antibodies are far more specific and reproducible than the antibodies produced by conventional techniques

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A

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6. Assertion: Yeasts should not be used in brewing and baking industries.

Reason. They produce several harmpul products during brewing and baking.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: D

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7. Assertion Cholesterol is one of the most important steroid in animals and human beings

Reason It is presnet as a compontent of

animals cell walls and acts as an agnet of cell wal extension

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: C

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8. Assertion. The technologies developed in the laboratories have to be gradually scaled up to industrial levels.

Reason. To obtain the product in large scale.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A

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9. Assertion Terrorists are trying to adopt bioweapons these days

Reason Bioweapons ar liked by terrorist organisztions as these are costly

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: C

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10. Assertion Biopiracy is being resorted to by the coutries of North

Reason countries fo suth are incapable of biopeiracy

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: C

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11. Assertion indians have a priro art for antidiabtetic property of karela ltrbgt Reason A froeign compnay has got a patent for antidbiaet ic property of karela

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A

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12. Assertion : Agrobacterium tumefaciens is popular in genetic engineering because this bacterium is associated with the roots of all cereal and pulse crops.

Reason : A gene incorporated in the bacterial chromosomal genome gets automatically transferred to the crop with which the bacterium is associated .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: D

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13. Assertion : in recombinant DNA technology, human genes are often transferred into bacteria (prokaryotes) or yeast (eukaryote).

Reason: Both bacteria and yeast multiply very fast to form huge population which express the desired gene.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A

14. Assertion : Recognition site should be perfectly single and reponsive to commonly used restriction enzymes.

Reason: In pNR 322 Alien DNA is ligated generally in the area of Bam-HI site of tetracycline resistance gene.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion

B. If both Assertion and Reason are ture but Reason is not a correct explanation of the Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer: A