

Class: XIIth Date:

Solutions

Subject : BIOLOGY DPP No. : 9

	Topic :- Biotechnolo	gy Pri	inciples & Pro	ocesses		
1.	A technology which has found immense use in sol a) DNA fingerprinting c) Recombinant DNA technology					
2.	The most important feature in a plasmid to be used a) Origin of replication c) Presence of sites for restriction endonuclease		d as a vector is b) Presence of a selectable marker d) Its size			
3.	DNA gyrase, the enzyme that participate a) DNA ligase c) DNA topoisomerase	es in the pr	ocess of DNA replicat b) DNA polymeras d) Reverse transcr	e		
4.	Abnormal gene is replaced by normal gene a) Gene therapy b) Medicines		h: c) Cloning	d) Radiation		
5.	The key tools required for the recombinant DNA technology are I. restriction enzymes II. Polymerase enzymes III. host organism ligases IV. Vectors V. host organisms Select the correct option a) I, II and III b) I, III, IV and V c) I, II, III and V d) I, II, III, IV and V					
6.	A tumour inducing plasmid widely used in the pro a) Escherichia coli c) Staphylococcus aureus		duction of transgenic plants in that of: b) Bacillus thuringiensis d) Agrobacterium tume faciens			
7.	Which one of the following palindromic some particular restriction enzyme? a) 5'GATATG3' 3'CTACTA5' b) 5'GAATTC3' 3'CTTAAG5' c) 5'CACGTA3' 3'CTCAGT5'	base sequ	ences in DNA can be e	asily cut at about the middle b		

	d) 5'CGTTCC 3'ATGGTA					
8.	Which of the following infection (s) can be diagnose a) HIV-1 and HIV-2 viruses c) <i>Mycobacterium tuberculosis</i>		nosed by the use of polyme b) Hepatitis-B virus d) All of the above	b) Hepatitis-B virus		
9.	Agarose is extracted			n g		
	a) Sea weeds	b) Blue-green algae	c) <i>Ephedra</i>	d) <i>Sargassam</i>		
10.	Which one is a true statement regarding DNA polymerase used in PCR? a) It is used to ligate introduced DNA in recipient cell b) It serves as a selectable marker					
	c) It is isolated from a virus			d) It remains active at high temperature		
11.	DNA fragments generated by the restriction endonucleases in a chemical reaction can be separated by:					
	a) Polymerase chain	•	b) Electrophoresis			
	c) Restriction mapp		d) Centrifugation			
12.	The two main technic I. chemical engineer II. genetic engineer III. human genome et IV. molecular biolog Choose the correct of	ng engine <mark>ering</mark> y	lern biotechnology are			
	a) I and II	b) I and III	c) II and IV	d) II and III		
13.	Stirred-tank bioreactors have been designed for a) Purification of the product b) Addition of preservatives to the product c) Availability of oxygen throughout the process d) Ensuring anaerobic conditions in the culture vessel					
14.	First biochemical to a) Interferon	be produced commercially b) Penicillin	by microbial cloning and g c) Human insulin	enetic engineering is: d) Fertility factors		
15.	Which is incorrect statement? a) <i>Taq</i> DNA polymerase is important for PCR b) <i>Taq</i> DNA polymerase is not thermostable c) In PCR two nucleotide primers are used d) <i>Taq</i> DNA polymerase, isolated from bacterium <i>Thermus aquaticus</i>					
16.	A genetically engine a) <i>Trichoderma</i>	ered micro-organism used s b) <i>Xanthomonas</i>	successfully in bioremediat c) <i>Bacillus</i>	cion of oil spills is a species of d) <i>Pseudomonas</i>		

- 17. There is a restriction endonuclease called *Eco*RI. What does "co" part in it stand for?

 a) Coli

 b) Coelom

 c) Coenzyme

 d) Colon
- 18. Which of the following would have the highest oxygen transfer rate characteristics?
 - a) A sparged stirred tank bioreactor being stirred at 200 RPM
 - b) A non-sparged stirred tank bioreactor being stirred at 200 RPM
 - c) A shake flask being mixed at 200 RPM
 - d) All of the above would have equivalent oxygen transfer rate characteristics
- 19. Enzymes breaking nucleic acids into nucleotides are called:
 - a) Hydrolases
- b) Amylases
- c) Nucleic acidases
- d) Nucleases
- 20. Palaeontologists unearthed a human skull during excavation. A small fragment of the scalp tissue was still attached to it. Only little DNA could be extracted from it. If the genes of the ancient man need to be analysed, the best way of getting sufficient amount of DNA from this extract is
 - a) By hybridizing the DNA with a DNA probe
 - b) By subjecting the DNA to polymerase chain reaction
 - c) By subjecting the DNA to gel electrophoresis
 - d) By treating the DNA with restriction endonucleases