



# BIOLOGY

## AAKASH INSTITUTE ENGLISH

### Mock Test 39 : ZOOLOGY

#### Example

1. Which of the following is called molecular scissors in context of biotechnology?

(a) DNA ligase

(b) Restriction exonucleases

(c) DNA polymerase

(d) Restriction endonucleases

A. DNA ligase

B. Restriction exonucleases

C. DNA polymerase

D. Restriction endonucleases

**Answer: D**



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2. Select the two core techniques that enabled birth of modern biotechnology.

A. (a) and (b)

B. (a) and (c)

C. (b) and (d)

D. (b) and (c)

**Answer: B**



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3. A scientist performed studies on a couple of restriction enzymes of E.coli bacterium that produced DNA with sticky ends. This scientist was

- (a) Herbert Boyer
- (b) Stanley Cohen
- (c) Boyer and Cohen
- (d) Chain and Florey

A. Herbert Boyer

B. Stanley Cohen

C. Boyer and Cohen

D. Chain and Florey

**Answer: A**



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4. Which of the following scientist had developed a method of removing plasmids from the bacterial cells and reinserting them in other cells?

A. Herbert Boyer and Cohen

B. Alexander Fleming

C. Stanley Cohen

D. Herbert Boyer

**Answer: C**



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**5. What is recombinant DNA?**

A. DNA in which RNA is integrated

B. DNA which is obtained by transcription  
of RNA

C. DNA which is inserted into a newly  
reconstructed cell

D. DNA which contains alien genes i.e.  
genes from more than one source  
organism

**Answer: D**



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6. If a piece of DNA is transferred into an alien organism, what will happen?

A. Most likely this piece of DNA will multiply itself on its own and is transferred into progeny cells of the organism

B. Most likely this piece of DNA will not be able to multiply itself in the progeny cells of the organism

C. It multiplies when gets integrated into the genome of the recipient at ori but is



not transferred into progeny cells of the organism

D. It will multiply itself after some food is added in the alien cell

**Answer: B**



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**7. Choose the correct statement.**

A. Restriction enzymes belongs to the large class of enzymes called nuclease

B. Restriction enzymes are of two types exonuclease and endonuclease

C. Restriction enzymes are so called because these only identify particular nucleotide sequence

D. in nature approximately 900 restriction enzymes are present

**Answer: A**



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8. Which of the following is not a tool of recombinant DNA technology?

- A. Restriction enzymes
- B. Cloning vectors
- C. Competent host
- D. Recombinant proteins

**Answer: D**



9. Choose incorrect match amongst restriction enzymes listed in column I and type of ends produced in column II

A. Column I EcoR I and Column II Sticky end

B. Column I - Hind III and Column II - Sticky end

C. Column I - Sma I and Column II - Blunt end

D. Column I - Bam HI and Column II - Flush  
end

**Answer: D**



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**10.** Read the following statements and choose the option with incorrect statements. (a) Restriction enzymes are obtained from prokaryotes. (b) Restriction endonucleases cut DNA strands by breaking hydrogen bonds at

specific points. (c) More than 230 restriction enzymes have been isolated from more than 900 strains of bacteria. (d) Each restriction enzyme recognizes a specific palindromic nucleotide sequence in DNA.

A. (a) and (b)

B. (b) and (c)

C. (c) and (d)

D. (a) and (d)

**Answer: B**



11. Which of the following is incorrect?

- A. Both bacteriophages and plasmids can be used as cloning vectors
- B. Bacteriophages have high copy numbers of their genome within bacterial cell
- C. Cloning vectors must have an Ori
- D. A good cloning vector definitely contains more than one recognition site for the

restriction enzyme to be used

**Answer: D**



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**12.** Read the following five statements in context of a plasmid. (a) Its DNA is always double stranded. (b) Its DNA is naked and without histone proteins. (c) Its DNA can replicate independent of genomic DNA. (d) Both exons and introns are present in plasmid



DNA. (e) Plasmid DNA can be either linear or circular. Which of the above given statements are incorrect?

A. (a) and (e)

B. (c) and (e)

C. (a), (b) and (c)

D. (d) and (e)

**Answer: D**



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**13.** If you can ligate foreign DNA at the BamHI site in the vector pBR322, which of the following will occur?

A. The recombinant plasmid will lose the ability to confer ampicillin resistance to the host bacteria

B. Bacteria containing recombinant pBR322 are unable to grow in tetracycline containing medium

C. Bacteria with recombinant plasmid will lose resistance to both tetracycline and ampicillin

D. Recombinant bacteria grow in tetracycline containing medium but are unable to grow in ampicillin rich medium

**Answer: B**



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**14.** Choose the mismatched pair from given options.

A. Insertional inactivation - beta-galactosidase

B. YAC vector - Yeast artificial chromosome

C. BAC vector - Largest bacteriophage vector

D. Ti plasmid - *Agrobacterium tumefaciens*

**Answer: C**



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**15.** Which of the following can prove useful as a vector in both a prokaryote and eukaryote?

A. Shuttle vector

B. Cosmid

C. plasmid

D. Eco IM

**Answer: A**



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**16.** Match column I with II and choose the correct option from given code

Column-I	Column-II
a. <i>Bam</i> HI	(i) rop site
b. <i>Pst</i> I	(ii) Tet <sup>R</sup>
c. <i>Pvu</i> II	(iii) Amp <sup>R</sup>
d. LacZ	(iv) $\beta$ -galactosidase

A. a(i), b(ii), c(iii), d(iv)

B. a(ii), b(i), c(iii), d(iv)

C. a(ii), b(iii), c(iv), d(i)

D. a(ii), b(iii), c(i), d(iv)

**Answer: D**



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