

National Testing Agency

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Principles of Biotechnology

Group Number :	1
Group Id :	899514136
Group Maximum Duration :	0
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Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No

Principles of Biotechnology

Section Id :	899514184
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100

Section Marks : 100
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 899514225
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 89951411616 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

The ability of single cells to divide and gives raise to a whole plant let is called

1. Unipotent
2. Pluripotent
3. Multipotent
4. Totipotent

Options :

89951445403. 1
89951445404. 2
89951445405. 3
89951445406. 4

Question Number : 2 Question Id : 89951411617 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Out of the following, which one is NOT the basic component of culture media used for plant tissue culture?

1. Complex mixture of salts
2. Amino acids
3. Serum albumin
4. Sugar/ sucrose

Options :

89951445407. 1
89951445408. 2
89951445409. 3

89951445410. 4

Question Number : 3 Question Id : 89951411618 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Mark the INCORRECT statement about agar, a gelling agent in plant tissue culture medium?

1. Not digested by plant enzymes
2. It does not use in micro propagation work
3. It does not react with media constituents
4. Remain stable at incubation temperature

Options :

89951445411. 1
89951445412. 2
89951445413. 3
89951445414. 4

Question Number : 4 Question Id : 89951411619 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a plant growth regulator?

1. Auxin
2. Cytokinins
3. Absciscic acid
4. Polyphenols

Options :

89951445415. 1
89951445416. 2
89951445417. 3
89951445418. 4

Question Number : 5 Question Id : 89951411620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is the main effect of cytokines in the tissue culture system?

1. Adventitious shoot formation
2. Induction of somatic embryos
3. Adventitious root formation
4. Shoot elongation

Options :

89951445419. 1
89951445420. 2
89951445421. 3
89951445422. 4

Question Number : 6 Question Id : 89951411621 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following plant hormone control fruit ripening?

1. Ethylene
2. Auxin
3. Gibbrellins
4. Abscisis acid

Options :

89951445423. 1
89951445424. 2
89951445425. 3
89951445426. 4

Question Number : 7 Question Id : 89951411622 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In plant tissue culture, what is the term Caulogenesis refers to?

1. Formation of callus
2. Formation of root
3. Formation of shoot
4. Genesis of leaf

Options :

- 89951445427. 1
- 89951445428. 2
- 89951445429. 3
- 89951445430. 4

Question Number : 8 Question Id : 89951411623 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Media room of a plant tissue culture lab should consist of the following EXCEPT...?

1. pH meter
2. Autoclave machine
3. Analytical balance
4. Biosafety cabine

Options :

- 89951445431. 1
- 89951445432. 2
- 89951445433. 3
- 89951445434. 4

Question Number : 9 Question Id : 89951411624 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the name of naturally occurring Auxin in plant?

1. 1-napthaleneacetic acid (NAA)
2. 2,4-Dichlorophenoxyacetic acid (2,4-D)
3. Indole 3-acetic acid (IAA)
4. 1-napthoxyacetic acid (NOA)

Options :

89951445435. 1
89951445436. 2
89951445437. 3
89951445438. 4

Question Number : 10 Question Id : 89951411625 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who is the father of tissue culture?

1. Bonner
2. Haberlandt
3. Laibach
4. Gautheret

Options :

89951445439. 1
89951445440. 2
89951445441. 3
89951445442. 4

Question Number : 11 Question Id : 89951411626 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Hormone pair required for a callus to differentiate are

1. Auxin and cytokinin
2. Auxin and ethylene
3. Auxin and abscisic acid
4. Cytokinins and gibberellin

Options :

89951445443. 1
89951445444. 2
89951445445. 3
89951445446. 4

Question Number : 12 Question Id : 89951411627 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which ratio is constant for DNA?

1. $A + G / T + C$
2. $A + T / G + C$
3. $A + C / U + G$
4. $A + U / G + C$

Options :

89951445447. 1
89951445448. 2
89951445449. 3
89951445450. 4

Question Number : 13 Question Id : 89951411628 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

According to Chargaff's rule, in a DNA molecule

1. The amount of adenine and thymine is equal to the amount of guanine and cytosine
2. The amount of adenine and guanine is equal to the amount of thymine and cytosine
3. The amount of adenine and uracil is equal to the amount of guanine and cytosine
4. The amount of adenine and guanine is equal to the amount of uracil and cytosine

Options :

- 89951445451. 1
- 89951445452. 2
- 89951445453. 3
- 89951445454. 4

Question Number : 14 Question Id : 89951411629 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Arrangement of nucleotides in DNA revealed by

1. Ultracentrifuge
2. X-Ray crystallography
3. Light microscope
4. Electron microscope

Options :

- 89951445455. 1
- 89951445456. 2
- 89951445457. 3
- 89951445458. 4

Question Number : 15 Question Id : 89951411630 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

One of the following nucleic acids has a left handed helix

1. M-RNA
2. T-RNA
3. A-DNA
4. Z-DNA

Options :

89951445459. 1
89951445460. 2
89951445461. 3
89951445462. 4

Question Number : 16 Question Id : 89951411631 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Which of the following statements is not true about RNA?

- 1.Does not have a double stranded structure
2. Thymine is present
3. Does not obey Chargaff's rule
4. The sugar contained in RNA is a ribose

Options :

89951445463. 1
89951445464. 2
89951445465. 3
89951445466. 4

Question Number : 17 Question Id : 89951411632 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Which of the following statements is true?

1. The template strand matches the sequence of the RNA transcript
2. The two strands of DNA run parallel to each other
3. G-C bonds are much more resistant to denaturation than A-T rich regions
4. The common form of DNA is left handed

Options :

- 89951445467. 1
- 89951445468. 2
- 89951445469. 3
- 89951445470. 4

Question Number : 18 Question Id : 89951411633 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In order to be replicated, DNA molecules must contain _____ region

1. Suppressor
2. Inducer
3. Origin (ORI)
4. Gene

Options :

- 89951445471. 1
- 89951445472. 2
- 89951445473. 3
- 89951445474. 4

Question Number : 19 Question Id : 89951411634 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Deanaturing _____ gels are used for separating small DNA molecules

- 1.electrofocusing
- 2.Native
3. Agarose
4. Polyacrylamide

Options :

89951445475. 1
89951445476. 2
89951445477. 3
89951445478. 4

Question Number : 20 Question Id : 89951411635 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Antigens are also called as

- 1.Immunogens
2. Immunoglobulins
3. Antiserum
4. Antiproteins

Options :

89951445479. 1
89951445480. 2
89951445481. 3
89951445482. 4

Question Number : 21 Question Id : 89951411636 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Number of hydrogen bonds between adenine and thymine?

1. One
2. Two
3. Three
4. Four

Options :

89951445483. 1
89951445484. 2
89951445485. 3
89951445486. 4

Question Number : 22 Question Id : 89951411637 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The anthers pollen development occurs in

1. Three Phases
2. Five phases
3. Four phases
4. Six phases

Options :

89951445487. 1
89951445488. 2
89951445489. 3
89951445490. 4

Question Number : 23 Question Id : 89951411638 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Microspores acts like a zygote to form an embryo and then a plantlet in

1. Cell division
2. Indirect androgenesis
3. Direct androgenesis
4. Differentiation

Options :

- 89951445491. 1
- 89951445492. 2
- 89951445493. 3
- 89951445494. 4

Question Number : 24 Question Id : 89951411639 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Fragments of DNA are not _____

1. Defined
2. Small
3. Amplicons
4. Replicons

Options :

- 89951445495. 1
- 89951445496. 2
- 89951445497. 3
- 89951445498. 4

Question Number : 25 Question Id : 89951411640 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Even if a DNA molecule contains _____ it may not function in a host cell.

1. Origin of replication
2. Inducer
3. Suppressor
4. Gene

Options :

- 89951445499. 1
- 89951445500. 2
- 89951445501. 3
- 89951445502. 4

Question Number : 26 Question Id : 89951411641 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

_____ also permits the easy bulk preparation of the foreign DNA sequence free from host-cell DNA.

1. Gene
2. Electroporator
3. Vector
4. Replicon

Options :

- 89951445503. 1
- 89951445504. 2
- 89951445505. 3
- 89951445506. 4

Question Number : 27 Question Id : 89951411642 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Genomic library construction is concerned with _____

1. Gene isolation
2. Protein production
3. Antibiotics
4. Regeneration

Options :

89951445507. 1
89951445508. 2
89951445509. 3
89951445510. 4

Question Number : 28 Question Id : 89951411643 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which DNA is restricted to making a genomic library?

1. Genomic
2. Plasmid
3. Phage
4. Plant

Options :

89951445511. 1
89951445512. 2
89951445513. 3
89951445514. 4

Question Number : 29 Question Id : 89951411644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the approximate size of fragments given off by EcoR1?

1. 1 kb
2. 2 kb
3. 3 kb
4. 4 kb

Options :

89951445515. 1
89951445516. 2
89951445517. 3
89951445518. 4

Question Number : 30 Question Id : 89951411645 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A genomic library is a collection of _____

1. Genes
2. Proteins
3. Vectors
4. Recombinants

Options :

89951445519. 1
89951445520. 2
89951445521. 3
89951445522. 4

Question Number : 31 Question Id : 89951411646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Chain-termination is method of _____

1. DNA Sequencing
2. Vector generation
3. Antibiotic production
4. Gene manipulation

Options :

89951445523. 1
89951445524. 2
89951445525. 3
89951445526. 4

**Question Number : 32 Question Id : 89951411647 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

The first significant DNA sequence obtained was that of _____

1. Lambda
2. Plasmid
3. Lactose
4. Mammals

Options :

89951445527. 1
89951445528. 2
89951445529. 3
89951445530. 4

**Question Number : 33 Question Id : 89951411648 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which type of DNA cleavage is done in Maxam Gilbert DNA sequencing method?

1. Edge
2. Interstitial
3. Base-specific
4. Gene-specific

Options :

89951445531. 1
89951445532. 2
89951445533. 3
89951445534. 4

Question Number : 34 Question Id : 89951411649 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the main enzyme component of Sanger sequencing?

1. Helicase
2. Polymerase
3. Nuclease
4. Gyrase

Options :

89951445535. 1
89951445536. 2
89951445537. 3
89951445538. 4

Question Number : 35 Question Id : 89951411650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following act as chain terminator?

1. NMPs
2. NTPs
3. dNTPs
4. ddNTPs

Options :

89951445539. 1
89951445540. 2
89951445541. 3
89951445542. 4

Question Number : 36 Question Id : 89951411651 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

_____ is a chemically synthesized oligonucleotide.

1. Klenow fragment
2. DNA
3. Primer
4. RNA

Options :

89951445543. 1
89951445544. 2
89951445545. 3
89951445546. 4

Question Number : 37 Question Id : 89951411652 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How many types of deoxynucleoside triphosphates are used in Sanger sequencing method ?

1. One
2. Two
3. Three
4. Four

Options :

89951445547. 1
89951445548. 2
89951445549. 3
89951445550. 4

Question Number : 38 Question Id : 89951411653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Prior to getting electrophoresed in the sequencing gel, DNA is _____

1. Purified
2. Denatured
3. Synthesized
4. Fragmented

Options :

89951445551. 1
89951445552. 2
89951445553. 3
89951445554. 4

Question Number : 39 Question Id : 89951411654 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Differentiated plant tissue shows high degree of _____

1. Inactivity
2. Toxicity
3. Growth
4. Plasticity

Options :

89951445555. 1
89951445556. 2
89951445557. 3
89951445558. 4

Question Number : 40 Question Id : 89951411655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In which cultures, cells are maintained in an undifferentiated state?

1. Leaf
2. Root
3. Stem
4. Callus

Options :

89951445559. 1
89951445560. 2
89951445561. 3
89951445562. 4

Question Number : 41 Question Id : 89951411656 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Explants are plant _____

1. Living tissue
2. Stems
3. Roots
4. Seeds

Options :

89951445563. 1
89951445564. 2
89951445565. 3
89951445566. 4

**Question Number : 42 Question Id : 89951411657 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Undetermined cells are capable of _____

1. Growth
2. Proliferation
3. Toxication
4. Protein production

Options :

89951445567. 1
89951445568. 2
89951445569. 3
89951445570. 4

**Question Number : 43 Question Id : 89951411658 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Gene silencing involves _____ genes.

1. Inhibitory
2. Activator
3. Inducer
4. Carcinogenic

Options :

89951445571. 1
89951445572. 2
89951445573. 3
89951445574. 4

**Question Number : 44 Question Id : 89951411659 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which of the following expression allows the control of transgene expression?

1. Repressible
2. Inducible
3. Altered
4. Toxic

Options :

89951445575. 1
89951445576. 2
89951445577. 3
89951445578. 4

**Question Number : 45 Question Id : 89951411660 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

What is used to restrict transgene expression?

1. Promoter
2. Inducer
3. Silencer
4. Reporter

Options :

89951445579. 1
89951445580. 2
89951445581. 3
89951445582. 4

**Question Number : 46 Question Id : 89951411661 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Antisense RNA blocks the activity of _____

1. DNA
2. mRNA
3. CDNA
4. RNA

Options :

89951445583. 1
89951445584. 2
89951445585. 3
89951445586. 4

**Question Number : 47 Question Id : 89951411662 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Presence of antisense and complementary sense RNA can lead to the formation of _____

1. Mutation
2. Duplex
3. Carcinogens
4. Protein

Options :

89951445587. 1
89951445588. 2
89951445589. 3
89951445590. 4

**Question Number : 48 Question Id : 89951411663 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which type of inhibition can be achieved using antisense RNA?

1. Stable
2. Unstable
3. Transient
4. Integrative

Options :

89951445591. 1
89951445592. 2
89951445593. 3
89951445594. 4

**Question Number : 49 Question Id : 89951411664 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which of the following is true for a plasmid?

1. Contains an origin of replication
2. Imparts a useful characteristic to the host bacterium
3. Possesses one or more genes.
4. Replicates only when the host genome is undergoing replication

Options :

- 89951445595. 1
- 89951445596. 2
- 89951445597. 3
- 89951445598. 4

Question Number : 50 Question Id : 89951411665 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What are the possible ways through which a plasmid can replicate?

1. Using cell's own replicative enzymes
2. Carry genes that code for special replicative enzymes
3. Replicate by inserting themselves into a bacterial chromosome
4. Carry genes that codes enzymes

Options :

- 89951445599. 1
- 89951445600. 2
- 89951445601. 3
- 89951445602. 4

Question Number : 51 Question Id : 89951411666 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

E. coli 'Ori C' region has the size of

1. 245bp
2. 340bp
3. 450bp
4. 510bp

Options :

89951445603. 1
89951445604. 2
89951445605. 3
89951445606. 4

Question Number : 52 Question Id : 89951411667 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

"Dna B protein" required for bacterial DNA replication can also be called as

1. Primase
2. Helicase
3. Ligase
4. Isomerase

Options :

89951445607. 1
89951445608. 2
89951445609. 3
89951445610. 4

Question Number : 53 Question Id : 89951411668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following are the smallest plasmid and an ideal cloning vector?

1. ColE1
2. RP4
3. PUC8
4. F

Options :

89951445611. 1
89951445612. 2
89951445613. 3
89951445614. 4

Question Number : 54 Question Id : 89951411669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How can conjugative and non-conjugative plasmids be differentiated?

1. On the basis of size
2. Presence of antibiotic resistance
3. Number of cloning and digestion sites
4. Presence of transfer genes

Options :

89951445615. 1
89951445616. 2
89951445617. 3
89951445618. 4

Question Number : 55 Question Id : 89951411670 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Ti plasmids are ____ plasmids.

1. Tumor inducing
2. Degradation
3. High copy number
4. Mammalian

Options :

89951445619. 1
89951445620. 2
89951445621. 3
89951445622. 4

Question Number : 56 Question Id : 89951411671 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is a high copy number plasmid?

1. Conjugative plasmids
2. Stringent plasmids
3. Non-conjugative plasmids
4. F-plasmid

Options :

89951445623. 1
89951445624. 2
89951445625. 3
89951445626. 4

Question Number : 57 Question Id : 89951411672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Where are the genes that encode for proteins required for replication encoded in a plasmid?

1. Near origin of replication
2. Opposite to origin of replication
3. In the bacteria's genome
4. Not present

Options :

89951445627. 1
89951445628. 2
89951445629. 3
89951445630. 4

Question Number : 58 Question Id : 89951411673 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In the purification of a plasmid DNA what will the clear lysate consist of?

1. Plasmid DNA
2. Genomic DNA
3. Buffer
4. Cell debris

Options :

89951445631. 1
89951445632. 2
89951445633. 3
89951445634. 4

Question Number : 59 Question Id : 89951411674 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Cutting and joining of the DNA are which techniques?

1. DNA degradation
2. DNA replication
3. DNA manipulation
4. DNA synthesis

Options :

89951445635. 1
89951445636. 2
89951445637. 3
89951445638. 4

Question Number : 60 Question Id : 89951411675 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enzymes that remove nucleotides one at a time from the end of a DNA molecule are called

1. Ligases
2. Exonucleases
3. Endonucleases
4. Modifying enzymes

Options :

89951445639. 1
89951445640. 2
89951445641. 3
89951445642. 4

Question Number : 61 Question Id : 89951411676 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Taq DNA polymerase is

1. DNA polymerase I
2. DNA polymerase II
3. DNA polymerase III
3. DNA polymerase IV

Options :

89951445643. 1
89951445644. 2
89951445645. 3
89951445646. 4

Question Number : 62 Question Id : 89951411677 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which type of restriction endonucleases is used most in genetic engineering?

1. Type I
2. Type II
3. Type III
4. Type IV

Options :

89951445647. 1
89951445648. 2
89951445649. 3
89951445650. 4

Question Number : 63 Question Id : 89951411678 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Restriction digests with which enzyme needs to be kept at a higher temperature than the usual 37 degree temperature?

1. TaqI
2. EcoRI
3. BamHI
4. HindIII

Options :

89951445651. 1
89951445652. 2
89951445653. 3
89951445654. 4

Question Number : 64 Question Id : 89951411679 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How can the sizes of individual cleavage products be determined?

1. Temperature check
2. Molecular weight check
3. Chromatography
4. Gel electrophoresis

Options :

89951445655. 1
89951445656. 2
89951445657. 3
89951445658. 4

Question Number : 65 Question Id : 89951411680 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which is the final step in the construction of a recombinant molecule?

1. Plasmid isolation
2. Gene amplification
3. Restriction digestion
4. Ligation

Options :

89951445659. 1
89951445660. 2
89951445661. 3
89951445662. 4

Question Number : 66 Question Id : 89951411681 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which DNA ligase enzyme is used in genetic engineering?

1. Bacterial ligase
2. T4 ligase
3. Yeast ligase
4. Pseudomonas ligase

Options :

89951445663. 1
89951445664. 2
89951445665. 3
89951445666. 4

Question Number : 67 Question Id : 89951411682 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Within the cell, ligase enzyme has the function of repairing any discontinuities that may arise in the double stranded DNA molecule. What are these discontinuities?

1. Absence of nucleotides in 1 strand
2. Missing phosphodiester bond in 1 strand
3. Missing phosphodiester bond in 2 both strands
4. Absence of nucleotides in both strands

Options :

89951445667. 1
89951445668. 2
89951445669. 3
89951445670. 4

Question Number : 68 Question Id : 89951411683 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following will have more efficient ligation?

1. Sticky ends
2. Blunt ends
3. Blunt ends and high concentration of DNA
4. Blunt ends and low concentration of DNA

Options :

89951445671. 1
89951445672. 2
89951445673. 3
89951445674. 4

Question Number : 69 Question Id : 89951411684 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Ligation takes place between

1. Adaptor and linker
2. Linker and vector
3. 5'-P terminus and 3'-OH terminus
4. Adaptor and vector

Options :

89951445675. 1
89951445676. 2
89951445677. 3
89951445678. 4

Question Number : 70 Question Id : 89951411685 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which is an example of a simplest vector (in terms of size)?

1. 2 micron circle
2. Bacteriophage
3. Plasmid
4. YAC

Options :

89951445679. 1
89951445680. 2
89951445681. 3
89951445682. 4

Question Number : 71 Question Id : 89951411686 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following properties is not taken into account while looking for a suitable vector?

1. Size
2. Parent organism
3. Restriction site
4. Origin of replication

Options :

89951445683. 1
89951445684. 2
89951445685. 3
89951445686. 4

Question Number : 72 Question Id : 89951411687 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which antibiotic resistance is present in pBR322?

1. Ampicillin
2. Kanamycin
3. Lactase
4. Gentamycin

Options :

89951445687. 1
89951445688. 2
89951445689. 3
89951445690. 4

Question Number : 73 Question Id : 89951411688 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is a phagemid?

1. A hybrid vector
2. Phage vector
3. Plasmid vector
4. Viral vector

Options :

89951445691. 1
89951445692. 2
89951445693. 3
89951445694. 4

Question Number : 74 Question Id : 89951411689 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What are cosmid vectors?

1. Hybrid between phage and plasmid
2. Hybrid between M13 and lambda phage
3. Modified lambda vector
4. Modified M13 vector

Options :

89951445695. 1
89951445696. 2
89951445697. 3
89951445698. 4

Question Number : 75 Question Id : 89951411690 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What digestion pattern of the restriction endonucleases is followed while constructing recombinant molecule using a cosmid?

1. Partial digestion
2. Complete digestion
3. Single endonuclease digestion
4. Double endonuclease digestion

Options :

89951445699. 1
89951445700. 2
89951445701. 3
89951445702. 4

Question Number : 76 Question Id : 89951411691 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which vectors carry the longest foreign DNA fragments?

1. M13 based vectors
2. Lambda based vectors
3. Plasmids
4. Hybrid vectors

Options :

89951445703. 1
89951445704. 2
89951445705. 3
89951445706. 4

Question Number : 77 Question Id : 89951411692 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the main use of a Bacterial Artificial Chromosome (BAC) vectors?

1. E.coli protein expression
2. Human genomic library construction
3. E.coli genomic library construction
4. Stable transfection

Options :

89951445707. 1
89951445708. 2
89951445709. 3
89951445710. 4

Question Number : 78 Question Id : 89951411693 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In which region does the infection of wound happen in crown gall disease?

1. Leaf
2. Root
3. Stem
4. Leaf node

Options :

89951445711. 1
89951445712. 2
89951445713. 3
89951445714. 4

Question Number : 79 Question Id : 89951411694 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the technique of biolistics used for?

1. Regeneration of plants
2. Regeneration of plasmid
3. Introduction of DNA
4. Infection by Agrobacterium

Options :

89951445715. 1
89951445716. 2
89951445717. 3
89951445718. 4

Question Number : 80 Question Id : 89951411695 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Using the biolistics approach, which step is skipped in the process of cloning plants?

1. Use of Agrobacterium
2. Use of plasmids
3. Use of foreign gene
4. Use of embryos

Options :

89951445719. 1
89951445720. 2
89951445721. 3
89951445722. 4

Question Number : 81 Question Id : 89951411696 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following entities of a plant contain their own genomes, distinct from the nucleus?

1. Golgi apparatus
2. Ribosomes
3. Chloroplast
4. Ribozymes

Options :

89951445723. 1
89951445724. 2
89951445725. 3
89951445726. 4

Question Number : 82 Question Id : 89951411697 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the drawback of using plant viruses as cloning vectors?

1. Small size
2. Large size
3. RNA as genetic material
4. DNA as genetic material

Options :

89951445727. 1
89951445728. 2
89951445729. 3
89951445730. 4

Question Number : 83 Question Id : 89951411698 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following process is initiated by the promoter?

1. Translation
2. Replication
3. Apoptosis
4. Transcription

Options :

89951445731. 1
89951445732. 2
89951445733. 3
89951445734. 4

Question Number : 84 Question Id : 89951411699 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The promoter region is recognized by

1. RNA polymerase
2. DNA polymerase
3. Replicase
4. Helicase

Options :

89951445735. 1
89951445736. 2
89951445737. 3
89951445738. 4

Question Number : 85 Question Id : 89951411700 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The initiation codon of the gene is located _____ of the ribosome binding site.

1. Upstream
2. Downstream
3. Away
4. Inside

Options :

89951445739. 1
89951445740. 2
89951445741. 3
89951445742. 4

Question Number : 86 Question Id : 89951411701 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What could be a possible reason for non-expression of a foreign gene in an E.coli host?

1. Recognition of expression signals
2. Non-recognition of expression signals
3. Indefinite size
4. Inefficient ligation

Options :

89951445743. 1
89951445744. 2
89951445745. 3
89951445746. 4

Question Number : 87 Question Id : 89951411702 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Name the asexual mode of embryo formation?

1. Protoplast fusion
2. Callus culture
3. Somatic embryogenesis
4. Protoplast culture

Options :

89951445747. 1
89951445748. 2
89951445749. 3
89951445750. 4

**Question Number : 88 Question Id : 89951411703 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Cloning vectors that can be used for recombinant protein production are called

-
1. Expression vectors
 2. Hybrid vectors
 3. Hosts
 4. Advanced vectors

Options :

89951445751. 1
89951445752. 2
89951445753. 3
89951445754. 4

**Question Number : 89 Question Id : 89951411704 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

The rate at which messenger RNA is synthesized is determined by _____

1. Promoter
2. Gene
3. Host
4. Nucleus

Options :

89951445755. 1
89951445756. 2
89951445757. 3
89951445758. 4

Question Number : 90 Question Id : 89951411705 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A repressible gene is the one that can be _____

1. Switched off
2. Switched on
3. Expressed
4. Killed

Options :

89951445759. 1
89951445760. 2
89951445761. 3
89951445762. 4

Question Number : 91 Question Id : 89951411706 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

High level of transcription may affect the ability of the recombinant plasmid to

1. Express
2. Sustain
3. Replicate
4. Take up DNA

Options :

89951445763. 1
89951445764. 2
89951445765. 3
89951445766. 4

Question Number : 92 Question Id : 89951411707 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The “lac promoter” is the sequence that controls transcription of _____

1. LacZ' gene
2. Trp gene
3. Lambda DNA
4. Amylose

Options :

89951445767. 1
89951445768. 2
89951445769. 3
89951445770. 4

Question Number : 93 Question Id : 89951411708 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Tryptophan synthesis is controlled by _____

1. Lac promoter
2. Trp promoter
3. Tac promoter
4. Lambda promoter

Options :

89951445771. 1
89951445772. 2
89951445773. 3
89951445774. 4

Question Number : 94 Question Id : 89951411709 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The process of expression of foreign genes in a plant is called _____

1. Gene expression
2. Transgenesis
3. Genetic transformation
4. Cell hybridization

Options :

89951445775. 1
89951445776. 2
89951445777. 3
89951445778. 4

Question Number : 95 Question Id : 89951411710 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Name the strategy where two-plasmid system is used for the introduction of the gene?

1. Binary vector system
2. Co-integration vector strategy
3. Agrobacterium
4. Selectable marker strategy

Options :

89951445779. 1
89951445780. 2
89951445781. 3
89951445782. 4

Question Number : 96 Question Id : 89951411711 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is considered as a visual marker?

1. Antibiotic marker
2. Resistance marker
3. Selectable marker
4. Screenable marker

Options :

89951445783. 1
89951445784. 2
89951445785. 3
89951445786. 4

Question Number : 97 Question Id : 89951411712 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is supplemented with vitamin A in order to improve its nutritional quality?

1. Cotton
2. Potato
3. Tomato
4. Rice

Options :

89951445787. 1
89951445788. 2
89951445789. 3
89951445790. 4

Question Number : 98 Question Id : 89951411713 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Embryo initiation is facilitated by _____

1. GA3
2. BPA
3. ABA
4. 2,4 D

Options :

89951445791. 1
89951445792. 2
89951445793. 3
89951445794. 4

Question Number : 99 Question Id : 89951411714 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following does not act as a fusogen in protoplast fusion?

1. 2,4 D
2. Polyethylene glycol
3. Calcium
4. PVA

Options :

89951445795. 1
89951445796. 2
89951445797. 3
89951445798. 4

Question Number : 100 Question Id : 89951411715 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Increase amount of auxin in callus culture will promote which part of the plant tissue?

1. Multilayer tissues
2. Meristem
3. Shoot
4. Root

Options :

89951445799. 1
89951445800. 2
89951445801. 3
89951445802. 4