

National Testing Agency

Question Paper Name :	Fish Biotechnology 23rd Sep 2020 Shift 2
Subject Name :	Fish Biotechnology
Creation Date :	2020-09-23 19:33:45
Duration :	120
Total Marks :	480
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes

Fish Biotechnology

Group Number :	1
Group Id :	71087060
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	480
Is this Group for Examiner? :	No

Part A General Knowledge

Section Id :	710870178
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	20

Number of Questions to be attempted :	20
Section Marks :	80
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870178
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 7108707141 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

1. Tea
2. Cotton
3. Rubber
4. Rice

Options :

- 71087028561. 1
- 71087028562. 2
- 71087028563. 3
- 71087028564. 4

Question Number : 2 Question Id : 7108707142 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

Choose the **correct** answer from the options below:

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

Options :

- 71087028565. 1
- 71087028566. 2
- 71087028567. 3
- 71087028568. 4

Question Number : 3 Question Id : 7108707143 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

Options :

- 71087028569. 1

71087028570. 2

71087028571. 3

71087028572. 4

Question Number : 4 Question Id : 7108707144 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following countries is the main rival of India in tea export?

1. China
2. Japan
3. Germany
4. Sri Lanka

Options :

71087028573. 1

71087028574. 2

71087028575. 3

71087028576. 4

Question Number : 5 Question Id : 7108707145 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement A: MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

Statement B: Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement A and Statement B are correct
2. Both Statement A and Statement B are incorrect
3. Statement A is correct but Statement B is incorrect
4. Statement A is incorrect but Statement B is correct

Options :

- 71087028577. 1
- 71087028578. 2
- 71087028579. 3
- 71087028580. 4

Question Number : 6 Question Id : 7108707146 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following is a global association of nations of the world to help cooperation in international law, security, economic development and social equity?

1. United Nations Organization
2. International Monetary Fund
3. World Bank
4. World Health Organization

Options :

- 71087028581. 1
- 71087028582. 2
- 71087028583. 3
- 71087028584. 4

Question Number : 7 Question Id : 7108707147 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

- 1. 57
- 2. 65
- 3. 52
- 4. 69

Options :

- 71087028585. 1
- 71087028586. 2
- 71087028587. 3
- 71087028588. 4

Question Number : 8 Question Id : 7108707148 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following statements is **incorrect**?

- 1. The highest number of pigs in the world are found in India
- 2. Utter Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

Options :

71087028589. 1
71087028590. 2
71087028591. 3
71087028592. 4

Question Number : 9 Question Id : 7108707149 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which type of N-fertilizer is suitable for water-logged soils?

1. Zinc Phosphate
2. Ammonium Sulphate
3. Calcium
4. Potassium Nitrate

Options :

71087028593. 1
71087028594. 2
71087028595. 3
71087028596. 4

Question Number : 10 Question Id : 7108707150 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

1. Bauxite deposits
2. Manganese deposits
3. Copper deposits
4. High-grade haematite deposits

Options :

71087028597. 1

71087028598. 2

71087028599. 3

71087028600. 4

Question Number : 11 Question Id : 7108707151 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m
2. 20 m x 5 m
3. 30 m x 3.33 m
4. 40 m x 2.5 m

Options :

71087028601. 1

71087028602. 2

71087028603. 3

71087028604. 4

Question Number : 12 Question Id : 7108707152 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In which one of the following industries, the consumption of natural rubber is the largest?

1. Auto tyres and tubes
2. Footwear
3. Dipped goods
4. Latex foam

Options :

71087028605. 1

71087028606. 2

71087028607. 3

71087028608. 4

Question Number : 13 Question Id : 7108707153 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following countries was the partner country of 34th Surajkund International Crafts Fair held in Haryana?

1. China
2. Nepal
3. Bhutan
4. Uzbekistan

Options :

71087028609. 1

71087028610. 2

71087028611. 3

71087028612. 4

Question Number : 14 Question Id : 7108707154 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

1. University of Delhi
2. University of Kolkata
3. University of Mumbai
4. University of Hyderabad

Options :

- 71087028613. 1
- 71087028614. 2
- 71087028615. 3
- 71087028616. 4

Question Number : 15 Question Id : 7108707155 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

Options :

- 71087028617. 1
- 71087028618. 2
- 71087028619. 3
- 71087028620. 4

Question Number : 16 Question Id : 7108707156 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals

Options :

- 71087028621. 1
- 71087028622. 2
- 71087028623. 3
- 71087028624. 4

Question Number : 17 Question Id : 7108707157 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Who was the first administrator-statesman to attempt planning as a means for economic development?

- 1. C. Rajagopalachari
- 2. V. T. Krishnamachari
- 3. M. Viswesvarayya
- 4. Sir C. P. Ramaswami Aiyar

Options :

- 71087028625. 1
- 71087028626. 2
- 71087028627. 3
- 71087028628. 4

Question Number : 18 Question Id : 7108707158 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina

Options :

- 71087028629. 1
- 71087028630. 2
- 71087028631. 3
- 71087028632. 4

Question Number : 19 Question Id : 7108707159 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Economic liberalization in India started with

- 1. Sustainable changes in industrial licensing policy
- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

Options :

- 71087028633. 1
- 71087028634. 2
- 71087028635. 3
- 71087028636. 4

Question Number : 20 Question Id : 7108707160 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

Options :

- 71087028637. 1

71087028638. 2
71087028639. 3
71087028640. 4

Part B Core Fishery Science III

Section Id :	710870179
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870179
Question Shuffling Allowed :	Yes

**Question Number : 21 Question Id : 7108707161 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1**

Arrange the following phases as per the eukaryotic cell cycle

- A. Gap-1(G 1) phase
- B. Gap-2 (G 2) phase
- C. S Phase
- D. M Phase
- E. Gap-0 (G 0) phase

Select the correct answer from the options given below:

- 1. B, C, D, E, A
- 2. A, B, D, E, C
- 3. D, E, A, B, C
- 4. E, A, C, B, D

Options :

- 71087028641. 1
- 71087028642. 2
- 71087028643. 3
- 71087028644. 4

Question Number : 22 Question Id : 7108707162 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A fish has 15% thymine in its DNA. How much guanine does it have?

- 1. 15%
- 2. 85%
- 3. 35%
- 4. 70%

Options :

- 71087028645. 1

71087028646. 2

71087028647. 3

71087028648. 4

Question Number : 23 Question Id : 7108707163 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Okazaki fragments are observed on

1. Leading strand
2. Lagging strand
3. RNA strand
4. None of the above

Options :

71087028649. 1

71087028650. 2

71087028651. 3

71087028652. 4

Question Number : 24 Question Id : 7108707164 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: Gene expression is regulated by DNA Methylation

Statement II: DNA methylation represses the gene expression

Select the correct answer from the following options

1. Statement I is wrong and Statement II is correct
2. Both Statement I and Statement II are wrong
3. Both the statement are correct
4. Statement I is correct but Statement II is wrong

Options :

- 71087028653. 1
- 71087028654. 2
- 71087028655. 3
- 71087028656. 4

Question Number : 25 Question Id : 7108707165 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The most commonly used restriction enzymes are

1. Type I restriction enzymes
2. Type II restriction enzymes
3. Type III restriction enzymes
4. Both Type I and Type III

Options :

- 71087028657. 1
- 71087028658. 2
- 71087028659. 3

71087028660. 4

Question Number : 26 Question Id : 7108707166 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Match the Enzymes with their property / use

List I	List II
Enzyme	Uses/Property
A. <i>E. coli</i> Ligase	I. Template independent polymerase
B. Reverse transcriptase	II. 5'-phosphorylation of oligonucleotides
C. T4 polynucleotide kinase	III. ATP-dependent ligase
D. T4 Ligase	IV. RNA-dependent DNA polymerase
E. Terminal transferase	V. NAD ⁺ -dependent ligase

Choose the **correct** answer from the options given below:

1. A - I, B - III, C - II, D - V, E - IV
2. A - IV, B - V, C - I, D - III, E - II
3. A - IV, B - III, C - V, D - II, E - I
4. A - V, B - IV, C - II, D - III, E - I

Options :

- 71087028661. 1
- 71087028662. 2
- 71087028663. 3
- 71087028664. 4

Question Number : 27 Question Id : 7108707167 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The value of an A 260 /A 280 for pure ds DNA is

1. ~1.8
2. >1.8
3. <1.8
4. 0

Options :

- 71087028665. 1
- 71087028666. 2
- 71087028667. 3
- 71087028668. 4

Question Number : 28 Question Id : 7108707168 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Read the following statements

Statement I: In SDS- PAGE, proteins are separated based on their mass/charge ratio

Statement II: In Native-PAGE, proteins are separated based on their mass

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Statement I is wrong and Statement II is correct
2. Statement I is correct and Statement II is wrong
3. Both the statements are wrong
4. Both the statements are correct

Options :

- 71087028669. 1
- 71087028670. 2
- 71087028671. 3

71087028672. 4

Question Number : 29 Question Id : 7108707169 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following marker has low mutation rate?

1. Microsatellites
2. SNPs
3. RAPD
4. RFLP

Options :

71087028673. 1
71087028674. 2
71087028675. 3
71087028676. 4

Question Number : 30 Question Id : 7108707170 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In a population of 100 individuals, DNA marker 'A' showed three alleles A₁, A₂, and A₃ in 30, 40, and 30 individuals, respectively. What is the PIC value of marker A?

1. 0.66
2. 0.34
3. 0.56
4. 0.18

Options :

71087028677. 1
71087028678. 2

71087028679. 3

71087028680. 4

Question Number : 31 Question Id : 7108707171 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DNA polymorphism is

1. Any change in the DNA sequence
2. DNA sequence variation present in more than 1% of the population
3. DNA sequences with modified nucleotides
4. A-, B- and Z forms of DNA

Options :

71087028681. 1

71087028682. 2

71087028683. 3

71087028684. 4

Question Number : 32 Question Id : 7108707172 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is single locus marker?

1. RAPD
2. AFLP
3. AP-PCR
4. Microsatellites

Options :

71087028685. 1

71087028686. 2

71087028687. 3

71087028688. 4

Question Number : 33 Question Id : 7108707173 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A fragment of DNA can be used as marker, if it has

1. Variable region only
2. Conserved region only
3. Both variable and conserved regions
4. Protein binding regions

Options :

- 71087028689. 1
- 71087028690. 2
- 71087028691. 3
- 71087028692. 4

Question Number : 34 Question Id : 7108707174 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following ICAR institute is designated for fish cell line repository?

1. CIFA
2. CIBA
3. CMFRI
4. NBFGR

Options :

- 71087028693. 1
- 71087028694. 2
- 71087028695. 3
- 71087028696. 4

Question Number : 35 Question Id : 7108707175 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The components of Ovaprim® are

1. sGnRHa+Dopamine antagonist
2. GtH+ Dopamine antagonist
3. HCG+ Dopamine antagonist
4. PCG

Options :

- 71087028697. 1
- 71087028698. 2
- 71087028699. 3
- 71087028700. 4

Question Number : 36 Question Id : 7108707176 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following nucleic acid amplification techniques does not need thermal cycler?

1. RT-PCR
2. AP-PCR
3. LAMP
4. RAPD

Options :

- 71087028701. 1
- 71087028702. 2
- 71087028703. 3
- 71087028704. 4

Question Number : 37 Question Id : 7108707177 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following neuro-peptide directly activates hypothalamic GnRH neurons?

1. Kisspeptin
2. Rhodopsin
3. Gonoleptin
4. Hypoleptin

Options :

71087028705. 1
71087028706. 2
71087028707. 3
71087028708. 4

Question Number : 38 Question Id : 7108707178 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Gut microbiota is responsible for

1. Suppressing immune response
2. Stimulating pathogenic bacteria in gut
3. Production of beneficial bioactive substances
4. Suppressing gut enzymes

Options :

71087028709. 1
71087028710. 2
71087028711. 3
71087028712. 4

Question Number : 39 Question Id : 7108707179 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In majority of fish species the hemoglobin is

1. Monomeric
2. Dimeric
3. Tetrameric
4. Pentameric

Options :

- 71087028713. 1
- 71087028714. 2
- 71087028715. 3
- 71087028716. 4

Question Number : 40 Question Id : 7108707180 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is correct in relation to haemoglobin oxygen affinity?

1. ATP increases O₂ affinity
2. Decreasing pH decreases Hb affinity for O₂
3. Urea suppresses O₂ affinity
4. Decrease in temperature depresses oxygen affinity

Options :

- 71087028717. 1
- 71087028718. 2
- 71087028719. 3
- 71087028720. 4

Question Number : 41 Question Id : 7108707181 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following fish species maintains the body temperature several degrees above the surrounding water

1. Hag fishes
2. Cods
3. Bill fishes
4. Herrings

Options :

71087028721. 1
71087028722. 2
71087028723. 3
71087028724. 4

Question Number : 42 Question Id : 7108707182 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following fish have sac like ventricle chamber?

1. Cod
2. Hake
3. Mackerel
4. Herring

Options :

71087028725. 1
71087028726. 2
71087028727. 3
71087028728. 4

Question Number : 43 Question Id : 7108707183 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following hormone does not take part in oögonial proliferation?

1. Estradiol-17 β
2. 17 α 20 β dihydroxyprogesterone
3. 20- β - trihydroxyprogesterone
4. 11-keto testosterone

Options :

71087028729. 1
71087028730. 2
71087028731. 3
71087028732. 4

Question Number : 44 Question Id : 7108707184 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following gene is not involved in the process of puberty?

1. Estrogen receptor 1
2. Androgen receptor
3. Kisspeptin
4. Insulin growth factor 3

Options :

71087028733. 1
71087028734. 2
71087028735. 3
71087028736. 4

Question Number : 45 Question Id : 7108707185 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following species naturally spawn in Spring and Autumn?

1. *Anabas testudineus*
2. *Cirrhinus mrigala*
3. *Tenualosa ilisha*
4. *Ompok pabda*

Options :

- 71087028737. 1
- 71087028738. 2
- 71087028739. 3
- 71087028740. 4

Question Number : 46 Question Id : 7108707186 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The main site of gluconeogenesis is

1. Brain
2. Muscle
3. Liver
4. Kidney

Options :

- 71087028741. 1
- 71087028742. 2
- 71087028743. 3
- 71087028744. 4

Question Number : 47 Question Id : 7108707187 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following structure of protein refers to the term 'fold' ?

1. Primary
2. Secondary
3. Tertiary
4. Quaternary

Options :

- 71087028745. 1
- 71087028746. 2
- 71087028747. 3
- 71087028748. 4

Question Number : 48 Question Id : 7108707188 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The alkaline phosphatase and horse radish peroxidase are two common enzymes used in ELISA, because these enzymes

1. Are coloured proteins
2. Bind to ELISA plate
3. Are very small
4. Have high turnover number

Options :

- 71087028749. 1
- 71087028750. 2
- 71087028751. 3
- 71087028752. 4

Question Number : 49 Question Id : 7108707189 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

As a feed additive, which of the following amino acids is used as flavour enhancer?

1. Valine
2. Tyrosine
3. Leucine
4. Glycine

Options :

- 71087028753. 1
- 71087028754. 2
- 71087028755. 3
- 71087028756. 4

Question Number : 50 Question Id : 7108707190 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The main amino acid residues involved in protein-DNA interactions are

1. Prolines
2. Positively charged
3. Valines
4. Negatively charged

Options :

- 71087028757. 1
- 71087028758. 2
- 71087028759. 3
- 71087028760. 4

Question Number : 51 Question Id : 7108707191 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following techniques is not used for protein quantification in proteomics?

1. Metabolic labeling
2. Chemical peptide labeling
3. Enzyme peptide labeling
4. Active site labelling

Options :

- 71087028761. 1
- 71087028762. 2
- 71087028763. 3
- 71087028764. 4

Question Number : 52 Question Id : 7108707192 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Phenol: Chlorophorm: Isoamyl alcohol used for DNA extraction will have the following pH

1. Less than 7.0
2. Greater than 7.0
3. Neutral
4. Highly alkaline

Options :

- 71087028765. 1
- 71087028766. 2
- 71087028767. 3
- 71087028768. 4

Question Number : 53 Question Id : 7108707193 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The aerobic glycolysis generates substantially _____per mole of glucose oxidized compared to anaerobic glycolysis

1. Less ATP
2. Less ADP
3. More ADP
4. More ATP

Options :

71087028769. 1
71087028770. 2
71087028771. 3
71087028772. 4

Question Number : 54 Question Id : 7108707194 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

As per the latest FAO fish production data, what is the contribution from Asian continent in the total Aquaculture production of the world ?

1. 69%
2. 89%
3. 59%
4. 49%

Options :

71087028773. 1
71087028774. 2
71087028775. 3
71087028776. 4

Question Number : 55 Question Id : 7108707195 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The gene responsible for the trait is situated on the autosomes but the trait is expressed in only one sex, this trait is known as

1. Sex influenced trait
2. Sex linked trait
3. Sex limited trait
4. Sex monitored trait

Options :

71087028777. 1
71087028778. 2
71087028779. 3
71087028780. 4

Question Number : 56 Question Id : 7108707196 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Highly inbred lines of fish can be produced by

1. Gynogenesis
2. Full-sib mating
3. Half-sib mating
4. Both 1 and 2

Options :

71087028781. 1
71087028782. 2
71087028783. 3
71087028784. 4

Question Number : 57 Question Id : 7108707197 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A fish with unknown genotype was crossed with double recessive homozygous fish. If the observed phenotypic ratio was 1:1: 1:1 then the genotype of the fish is

1. It is a heterozygote at one of the locus
2. It is a double heterozygote
3. It is double recessive homozygous
4. Insufficient information

Options :

- 71087028785. 1
- 71087028786. 2
- 71087028787. 3
- 71087028788. 4

Question Number : 58 Question Id : 7108707198 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Two highly inbred, unrelated fish were mated to produce the full-sibs, what is the per-cent of inbreeding in the offspring?

1. 0.00
2. 12.50
3. 25.00
4. 50.00

Options :

- 71087028789. 1
- 71087028790. 2
- 71087028791. 3
- 71087028792. 4

Question Number : 59 Question Id : 7108707199 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A population is found to be in Hardy-Weinberg equilibrium for a locus with two alleles.

Identify whether the following statement hold True or False

- i. The maximum per cent of heterozygote individuals can be 50%
- ii. Rare alleles are found more in homozygous condition
- iii. Maximum per cent of heterozygotes are found when allele frequencies are equal
- iv. The sum of gene frequency will be equal to sum of genotype frequency

- 1. i=True, ii=True, iii=True and iv=True
- 2. i=True, ii=False, iii=False and iv=True
- 3. i=True, ii=False, iii=True and iv=True
- 4. i=False, ii=False, iii=True and iv=True

Options :

- 71087028793. 1
- 71087028794. 2
- 71087028795. 3
- 71087028796. 4

Question Number : 60 Question Id : 7108707200 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The property/properties of Breeding Value is/are

- 1. It is a property of an individual
- 2. It is a property of the population in which the individual is reared
- 3. It is a biological constant
- 4. Both 1 and 2

Options :

- 71087028797. 1
- 71087028798. 2
- 71087028799. 3
- 71087028800. 4

Question Number : 61 Question Id : 7108707201 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Genetic death leads to

1. Death of population
2. Loss of some genes from a population
3. Death of selected stock
4. All of the above

Options :

- 71087028801. 1
- 71087028802. 2
- 71087028803. 3
- 71087028804. 4

Question Number : 62 Question Id : 7108707202 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Sire variance component is _____ of the additive genetic variance

1. Full
2. Half
3. One Third
4. Quarter

Options :

- 71087028805. 1
- 71087028806. 2
- 71087028807. 3
- 71087028808. 4

Question Number : 63 Question Id : 7108707203 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Among the following selection methods, which one is the the least accurate method of selection for aquatic species?

1. Individual selection
2. Progeny testing
3. Pedigree selection
4. Family selection

Options :

- 71087028809. 1
- 71087028810. 2
- 71087028811. 3
- 71087028812. 4

Question Number : 64 Question Id : 7108707204 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of full sibs the dominance deviation is

1. $\frac{1}{2} V_d$
2. $\frac{1}{4} V_d$
3. $1 V_d$
4. $\frac{3}{4} V_d$

Options :

- 71087028813. 1
- 71087028814. 2
- 71087028815. 3
- 71087028816. 4

Question Number : 65 Question Id : 7108707205 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

GCA refers to

1. General Combining Ability
2. Genomic Combining Ability
3. Genetic Combining Ability
4. All

Options :

- 71087028817. 1
- 71087028818. 2
- 71087028819. 3
- 71087028820. 4

Question Number : 66 Question Id : 7108707206 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is a permeating cryoprotectant?

1. Glycerol
2. Dimethyl sulphoxide (DMSO)
3. Methanol & ethylene glycol
4. All of the above

Options :

- 71087028821. 1
- 71087028822. 2
- 71087028823. 3
- 71087028824. 4

Question Number : 67 Question Id : 7108707207 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

With respect to the mRNA – ribosome complex for translation mechanism which of the following pair is wrong?

1. Small subunit – decoding center
2. A site – aminoacylated tRNA binding site
3. P site – peptidyl tRNA binding site
4. E site – polypeptide exit site

Options :

- 71087028825. 1
- 71087028826. 2
- 71087028827. 3
- 71087028828. 4

Question Number : 68 Question Id : 7108707208 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The molecular scissors used to cut DNA into specific genes of interest are called

1. Exonucleases
2. Restriction endonucleases
3. Ligases
4. Polymearses

Options :

- 71087028829. 1
- 71087028830. 2
- 71087028831. 3
- 71087028832. 4

Question Number : 69 Question Id : 7108707209 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

BIT score measures-

1. Expectation value
2. Sequence similarity
3. Randomness
4. Homology

Options :

- 71087028833. 1
- 71087028834. 2
- 71087028835. 3
- 71087028836. 4

Question Number : 70 Question Id : 7108707210 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

How is Z-value related to the score-

1. Lower the value more significant the score
2. Lower the value less significant the score
3. Z-value does not relate to significance of the score
4. Higher the value more significant the score

Options :

- 71087028837. 1
- 71087028838. 2
- 71087028839. 3
- 71087028840. 4

Part C Fish Biotechnology

Section Id :

710870180

Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870180
Question Shuffling Allowed :	Yes

Question Number : 71 Question Id : 7108707211 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

“LINE’ is one category of intervening repeat sequences in the genome. What does it stand for?

1. Linear intervening non-coding elements
2. Linear interspersed nuclear elements
3. Long intervening nuclear elements
4. Long interspersed nuclear elements

Options :

- 71087028841. 1
- 71087028842. 2
- 71087028843. 3
- 71087028844. 4

Question Number : 72 Question Id : 7108707212 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following is a post-translational modification event in eukaryote?

1. Capping
2. Alternate splicing
3. Polyadenylation
4. Phosphorylation

Options :

- 71087028845. 1
- 71087028846. 2
- 71087028847. 3
- 71087028848. 4

Question Number : 73 Question Id : 7108707213 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Prophase I in meiosis has several sub-stages: In which of the following sub-stages crossing over takes place?

1. Zygonema
2. Pachynema
3. Diplonema
4. Leptonema

Options :

- 71087028849. 1
- 71087028850. 2
- 71087028851. 3
- 71087028852. 4

Question Number : 74 Question Id : 7108707214 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following triplets is not a stop codon?

1. TAG
2. TGA
3. TAA
4. TGG

Options :

- 71087028853. 1
- 71087028854. 2
- 71087028855. 3
- 71087028856. 4

Question Number : 75 Question Id : 7108707215 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Exocytosis is a cellular process which involves release of unwanted contents outside by specialized organelle. Which one of the following organelles is capable of doing this?

1. Mitochondria
2. Lysosomes
3. Peroxisomes
4. Golgi Complex

Options :

- 71087028857. 1
- 71087028858. 2
- 71087028859. 3
- 71087028860. 4

Question Number : 76 Question Id : 7108707216 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Leber's hereditary optic neuropathy is an eye disease caused by

1. Mitochondria
2. Peroxisomes
3. Ribosomes
4. Lysosomes

Options :

- 71087028861. 1
- 71087028862. 2
- 71087028863. 3
- 71087028864. 4

Question Number : 77 Question Id : 7108707217 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

One of the inherited disorders caused by the cytoskeleton is known as

1. DMD
2. LOHN
3. Beta Thalassemia
4. Cystic fibrosis

Options :

- 71087028865. 1
- 71087028866. 2
- 71087028867. 3
- 71087028868. 4

Question Number : 78 Question Id : 7108707218 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Gene responsible for the Huntington's disease is located on chromosome

1. 4
2. 21
3. 12
4. 9

Options :

- 71087028869. 1
- 71087028870. 2
- 71087028871. 3
- 71087028872. 4

Question Number : 79 Question Id : 7108707219 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following DNA elements is grouped under retro-transposons?

1. IS Elements
2. Tn3 elements
3. Bobo elements
4. LTR

Options :

- 71087028873. 1
- 71087028874. 2
- 71087028875. 3
- 71087028876. 4

Question Number : 80 Question Id : 7108707220 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DNA elements involving reverse transcription through aRNA template ,to be inserted into chromosome are termed as

1. Jumping genes
2. Transposons
3. Replicative transposon
4. Retro-transposon

Options :

- 71087028877. 1
- 71087028878. 2
- 71087028879. 3
- 71087028880. 4

Question Number : 81 Question Id : 7108707221 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Genes specifying products for housekeeping function are expressed continually in most of the cells. These genes are known as

1. Inducible genes
2. Repressive genes
3. Constitutive genes
4. Metabolic genes

Options :

- 71087028881. 1
- 71087028882. 2
- 71087028883. 3
- 71087028884. 4

Question Number : 82 Question Id : 7108707222 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following genes is not constitutively expressed?

1. rRNA
2. tRNA
3. RNA Polymerase subunit
4. DNA polymerase

Options :

- 71087028885. 1
- 71087028886. 2
- 71087028887. 3
- 71087028888. 4

Question Number : 83 Question Id : 7108707223 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The presence of sufficient amount of end product of a biosynthetic pathway often block the activity of the first enzyme in the pathway. This mechanism is known as

1. Feedback mechanism
2. Feedback inhibition
3. Post translational regulatory mechanism
4. Repressor inhibition

Options :

- 71087028889. 1
- 71087028890. 2
- 71087028891. 3
- 71087028892. 4

Question Number : 84 Question Id : 7108707224 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Peptidoglycan is a substance unique to prokaryotes. Which part of the cell it is located?

1. Plasma membrane
2. Beneath the cell wall
3. Cell wall
4. Cytoplasm

Options :

- 71087028893. 1
- 71087028894. 2
- 71087028895. 3
- 71087028896. 4

Question Number : 85 Question Id : 7108707225 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Lac operon in E. coli consists of promoter, an operator and structural genes. Which of the following genes is not a part of lac operon?

1. Lac O
2. Lac Z
3. Lac Y
4. Lac A

Options :

- 71087028897. 1
- 71087028898. 2
- 71087028899. 3
- 71087028900. 4

Question Number : 86 Question Id : 7108707226 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following RNAs is present abundantly in a cell

1. SnRNA
2. mRNA
3. tRNA
4. rRNA

Options :

71087028901. 1
71087028902. 2
71087028903. 3
71087028904. 4

Question Number : 87 Question Id : 7108707227 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Epigenetics deals with

1. Changes in genotype due to methylation
2. Changes in phenotype due to the methylation
3. Heritable phenotype changes through methylation and histone modification.
4. Heritable phenotype changes through non-histone modification

Options :

71087028905. 1
71087028906. 2
71087028907. 3
71087028908. 4

Question Number : 88 Question Id : 7108707228 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

CRISPR sequences are originated basically from –

1. Bacteria
2. Archea
3. Viruses
4. Bacteriophages

Options :

71087028909. 1
71087028910. 2
71087028911. 3
71087028912. 4

Question Number : 89 Question Id : 7108707229 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The group of DNA manipulative enzyme capable of introducing or removing supercoils is known as –

1. Nucleases
2. Topoisomerases
3. Endonucleases
4. Polymerases

Options :

71087028913. 1
71087028914. 2
71087028915. 3
71087028916. 4

Question Number : 90 Question Id : 7108707230 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a blunt end ligation reaction in vitro, which one of the following components enhances the chances of ligation.

1. Higher concentration of ligase
2. High vector: insert molar ratio
3. Higher total reaction volume
4. Addition of ATP in reaction

Options :

- 71087028917. 1
- 71087028918. 2
- 71087028919. 3
- 71087028920. 4

Question Number : 91 Question Id : 7108707231 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Single cell proteins are produced by several yeasts, algae, fungi and bacterial species. A popular fungus in the list is –

1. S. Cerevisiae
2. P. pastoris
3. F. venenatum
4. C. utilis

Options :

- 71087028921. 1
- 71087028922. 2
- 71087028923. 3
- 71087028924. 4

Question Number : 92 Question Id : 7108707232 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The following is a list of few promoters used in expression vector: Which one of these is a hybrid promoter?

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

Options :

- 71087028925. 1
- 71087028926. 2
- 71087028927. 3
- 71087028928. 4

Question Number : 93 Question Id : 7108707233 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DNA polymerases are the enzymes that synthesize a new strand of DNA complementary to an existing DNA or RNA template. Which DNA polymerase from the list given below requires a RNA template?

1. DNA Pol I
2. DNA Pol I (Klenow fragment)
3. Reverse transcriptase
4. Taq polymerase

Options :

- 71087028929. 1
- 71087028930. 2
- 71087028931. 3
- 71087028932. 4

Question Number : 94 Question Id : 7108707234 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1**

The recognition sequence for restriction endonuclease Hind III is

1. AAGCTT
2. GAATTC
3. GATC
4. GGCC

Options :

- 71087028933. 1
- 71087028934. 2
- 71087028935. 3
- 71087028936. 4

**Question Number : 95 Question Id : 7108707235 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1**

Phosphodiester bonding during joining two DNA fragments is catalyzed by one of the following enzymes. Name it

1. DNA ligase
2. Alkaline phosphatase
3. Polynucleotide kinase
4. DNA polymerase

Options :

- 71087028937. 1
- 71087028938. 2
- 71087028939. 3
- 71087028940. 4

**Question Number : 96 Question Id : 7108707236 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 4 Wrong Marks : 1

Which one of the following enzymes possesses both DNA polymerase and DNA degradation activities?

1. DNA polymerase I
2. DNA polymerase alpha
3. Klenow fragment
4. T7 DNA polymerase

Options :

- 71087028941. 1
- 71087028942. 2
- 71087028943. 3
- 71087028944. 4

Question Number : 97 Question Id : 7108707237 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following enzymes is a 8 cutter (8 nucleotide recognition sequence)?

1. Bgl I
2. Bgl II
3. Hae III
4. Not I

Options :

- 71087028945. 1
- 71087028946. 2
- 71087028947. 3
- 71087028948. 4

Question Number : 98 Question Id : 7108707238 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

There are several enzymes that modify DNA molecules by addition or removal of specific chemical groups. Which one of the following adds phosphate groups to 5' termini?

1. Terminal transferase
2. Alkaline phosphatase
3. T4 Polynucleotide kinase
4. T4 DNA polymerase

Options :

- 71087028949. 1
- 71087028950. 2
- 71087028951. 3
- 71087028952. 4

Question Number : 99 Question Id : 7108707239 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The phenomenon ,host-controlled restriction is appropriately associated with the statement

1. Type II restriction endonuclease have recognition sequence
2. Bacteria produce restriction endonuclease enzymes
3. Bacteria are immune to bacteriophage infection
4. Bacterium's own DNA is protected due to methylated recognition sites.

Options :

- 71087028953. 1
- 71087028954. 2
- 71087028955. 3
- 71087028956. 4

Question Number : 100 Question Id : 7108707240 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Why is Taq polymerase used for PCR rather than other polymerases?

1. It is synthetic form produced through Rec-DNA technology
2. It is heat stable
3. It is user friendly
4. It is commonly produced form

Options :

- 71087028957. 1
- 71087028958. 2
- 71087028959. 3
- 71087028960. 4

Question Number : 101 Question Id : 7108707241 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hybridization buffer contains higher salt concentration. Because

1. It stabilizes phosphate sugar backbone
2. Increases viscosity
3. Increases ionic concentration and probability of re-association between complementary strands
4. It stabilizes the temperature

Options :

- 71087028961. 1
- 71087028962. 2
- 71087028963. 3
- 71087028964. 4

Question Number : 102 Question Id : 7108707242 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Homopolymer tailing offers production of sticky ends on blunt end DNA molecule. The enzyme used for the purpose is known as

1. Kinase
2. DNA polymerase
3. Phosphatase
4. Terminal transferase

Options :

- 71087028965. 1
- 71087028966. 2
- 71087028967. 3
- 71087028968. 4

Question Number : 103 Question Id : 7108707243 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Linkers and adapters are very useful during DNA cloning. Which one of the following statements is wrong?

1. Linkers can ligate to themselves
2. Adapter can ligate to themselves
3. Adapters and linkers are short synthetic nucleotides
4. Linkers are blunt ended molecules with RE site

Options :

- 71087028969. 1
- 71087028970. 2
- 71087028971. 3
- 71087028972. 4

Question Number : 104 Question Id : 7108707244 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following cloning vectors is not originated from E. coli

1. pBR322
2. pUC19
3. pUC18
4. M13

Options :

- 71087028973. 1
- 71087028974. 2
- 71087028975. 3
- 71087028976. 4

Question Number : 105 Question Id : 7108707245 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A number of important pharmaceutical compounds have been obtained from genes cloned in eukaryotic cells. Identify the one from the following proteins that has been cloned in insect cells

1. Insulin
2. Growth hormone
3. Interleukins
4. Factor III

Options :

- 71087028977. 1
- 71087028978. 2
- 71087028979. 3
- 71087028980. 4

Question Number : 106 Question Id : 7108707246 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Sanger sequencing involves chain termination method facilitated by the presence of di-deoxy nucleotide. Which of the following statements is false ?

1. Four separate in vitro reactions result in four different groups of terminated fragments.
2. Respective di-deoxy nucleotides are added to each reaction tubes for chain termination
3. Two specific primers are used for annealing purpose
4. DNA polymerase is used for synthesis of complementary strand.

Options :

- 71087028981. 1
- 71087028982. 2
- 71087028983. 3
- 71087028984. 4

Question Number : 107 Question Id : 7108707247 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Identify the type I DNA marker from the list given below

1. Simple sequence repeats
2. Minisatellites
3. Restriction fragment length polymorphism marker
4. Satellite DNA

Options :

- 71087028985. 1
- 71087028986. 2
- 71087028987. 3
- 71087028988. 4

Question Number : 108 Question Id : 7108707248 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Various NGS platforms are available for massive parallel sequencing of genome. Which platform from the list was the first to come to market?

1. Illumina
2. 454-GSFLX
3. PacBio
4. Nanopore

Options :

- 71087028989. 1
- 71087028990. 2
- 71087028991. 3
- 71087028992. 4

Question Number : 109 Question Id : 7108707249 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If genome size of catla is 1.01 GB, then to achieve a 200 x coverage , how much sequence data should be generated?

1. 200 Gb
2. 100 GB
3. 202 GB
4. 150 GB

Options :

- 71087028993. 1
- 71087028994. 2
- 71087028995. 3
- 71087028996. 4

Question Number : 110 Question Id : 7108707250 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Minisatellite DNA markers are popular for forensic analysis. Which statement from the given list is not true

1. The probe sequence is derived by PCR
2. The probe sequence is a common core sequence
3. The analysis involves RE digestion
4. The results provides individual specific fingerprints.

Options :

- 71087028997. 1
- 71087028998. 2
- 71087028999. 3
- 71087029000. 4

Question Number : 111 Question Id : 7108707251 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following software is not for genome assembly ?

1. SOAP De Novo
2. Masurca
3. Velvet
4. Blast 2Go

Options :

- 71087029001. 1
- 71087029002. 2
- 71087029003. 3
- 71087029004. 4

Question Number : 112 Question Id : 7108707252 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Identify from the given list the database which is not related to protein

1. NR
2. PDB
3. KEGG
4. InterPro

Options :

- 71087029005. 1
- 71087029006. 2
- 71087029007. 3
- 71087029008. 4

Question Number : 113 Question Id : 7108707253 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

SAM and BAM file formats are associated with

1. DNA sequence alignment data
2. Annotation data
3. DNA variation data
4. Raw sequence data

Options :

- 71087029009. 1
- 71087029010. 2
- 71087029011. 3
- 71087029012. 4

Question Number : 114 Question Id : 7108707254 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

SNP variation data in vcf files are presently submitted to

1. DB-SNP
2. SRA
3. NR
4. EVA

Options :

- 71087029013. 1
- 71087029014. 2
- 71087029015. 3
- 71087029016. 4

Question Number : 115 Question Id : 7108707255 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Pyrosequencing is a sequencing method developed and used by

1. 454-GS-FLX
2. Sequel I
3. Sequel II
4. Illumina

Options :

- 71087029017. 1
- 71087029018. 2
- 71087029019. 3
- 71087029020. 4

Question Number : 116 Question Id : 7108707256 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Synthesis of vitellogenin is under the control of

1. Estradiol 17 beta
2. Corticosteroid
3. Progesterone
4. Testosterone

Options :

- 71087029021. 1
- 71087029022. 2
- 71087029023. 3
- 71087029024. 4

Question Number : 117 Question Id : 7108707257 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Somatostatin is synthesized in

1. Hypothalamus
2. Pituitary
3. Islet of Langerhans
4. Pancreas

Options :

- 71087029025. 1
- 71087029026. 2
- 71087029027. 3
- 71087029028. 4

Question Number : 118 Question Id : 7108707258 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Microinjection directly into the nucleus of fish is tough, because

1. The egg nucleus in fish is very small and contain a tough chorion
2. The egg in fish is very small without chorion
3. It is difficult to hold the fish egg by injector
4. The fish egg is extra slippery

Options :

- 71087029029. 1
- 71087029030. 2
- 71087029031. 3
- 71087029032. 4

Question Number : 119 Question Id : 7108707259 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

From among the following delivery systems, which one is categorized under direct transgene delivery ?

1. Particle mediated
2. Electroporation
3. Lipofection
4. Virus-tagged

Options :

- 71087029033. 1
- 71087029034. 2
- 71087029035. 3
- 71087029036. 4

Question Number : 120 Question Id : 7108707260 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Diphtheria, tetanus and hepatitis-B are the examples of

1. Conjugate vaccines
2. Live- attenuated vaccine
3. Subunit vaccine
4. Recombinant DNA vaccine

Options :

71087029037. 1

71087029038. 2

71087029039. 3

71087029040. 4