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CUET UG Previous Year Question Paper 2022

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CUET UG

Previous Year Question Paper

2022

Section II

Biology

CUET 2022 QUESTION PAPER

Question:

Match List I with List II

LIST I		LIST II	
A.	Monoecious plants	I.	Date palm
B.	Unisexual	II.	Leach
C.	Hermaphrodites	III.	Cucurbita
D.	Dioecious Plants	IV.	Cockroach

Choose the correct answer from the options given below:

- A A-III, B-IV, C-I, D-II
- B A-III, B-IV, C-II, D-I
- C A-I, B-IV, C-II, D-III
- D A-I, B-IV, C-III, D-II

CUET 2022 QUESTION PAPER

Section Name:BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Physical barrier	I.	Interferons
B.	Cellular barrier	II.	Natural killer cells
C.	Physiological barrier	III.	Tears from eyes
D.	Cytokine barrier	IV.	Skin

Choose the correct answer from the options given below:

- A A-I, B-IV, C-III, D-II
- B A-II, B-I, C-IV, D-III
- C A-III, B-IV, C-I, D-II
- D A-IV, B-II, C-III, D-I

Section Name:BIOLOGY

Question:

A couple is unable to produce a child as the male partner has low sperm count
Infertility caused by this condition can be treated using

- | | |
|----------|------|
| A | ZIFT |
| B | AI |
| C | GIFT |
| D | IUT |



Section Name: BIOLOGY

Question:

Which of these are the carriers of male gametes in some seed plants?

- | | |
|---|-------------------------|
| A | Microspore mother cells |
| B | Pollen Grains |
| C | Anthers |
| D | Megaspore mother cells |

CUET 2022 QUESTION PAPER

Question:

Match List I with List II

LIST I		LIST II	
A.	Malaria	I.	<i>Salmonella</i>
B.	Pneumonia	II.	<i>Wuchereria</i>
C.	Typhoid	III.	<i>Haemophilus</i>
D.	Filariasis	IV.	<i>Plasmodium</i>

Choose the correct answer from the options given below:

A A - I, B - II, C - IV, D - III

B A - IV, B - III, C - I, D - II

C A - III, B - II, C - I, D - IV

D A - II, B - IV, C - I, D - III

Section Name: BIOLOGY

Question:

Arrange the following steps in order for the technique of DNA finger printing.

- A. Isolation of DNA
- B. Separation of DNA fragments by gel. electrophoresis
- C. Digestion of DNA by restriction endonucleases
- D. Blotting of separated DNA fragments to nylon membrane
- E. Hybridisation using VNTR probe followed by autoradiography

Choose the correct answer from the options given below :

- | | |
|---|-----------|
| A | A,C,B,D,E |
| B | A,B,C,D,E |
| C | A,B,D,C,E |
| D | A,E,C,B,D |



Section Name:BIOLOGY

Question:

Long term use of alcohol specially causes-

- | | |
|----------|-------------------------|
| A | Liver cirrhosis |
| B | Arthrities |
| C | Pulmonary system damage |
| D | Premature baldness |

CUET 2022 QUESTION PAPER

Section Name:BIOLOGY

Question:

Select the appropriate options with reference to post fertilisation changes in angiosperms.

- A. Inner integument of ovule develops into tegmen.
- B. Ovary wall forms pericarp
- C. Ovule forms fruit
- D. Zygote forms endosperm
- E. Outer integument of ovule develops into Testa

Choose the correct answer from the options given below :

A B, E only

B A, B, E only

C C, D, B only

D A, C, B only

Section Name:BIOLOGY

Question:

The part of the human sperm that helps in the fertilisation of the ovum is a cap-like structure called

- | | |
|----------|--------------|
| A | Head |
| B | Acrosome |
| C | Middle piece |
| D | Tail |

Question:

Rearrange the events of life cycle of a retrovirus.

- A. New viral RNA produced by infected cell
- B. Reverse transcription
- C. New virus particles inject into other cells
- D. Viral RNA introduced into the cell
- E. Viral DNA incorporates into host genome

Choose the correct answer from the options given below :

- | | |
|----------|-----------|
| A | A,B,D,E,C |
| B | B,E,D,A,C |
| C | C,A,B,D,E |
| D | D,B,E,A,C |

Section Name:BIOLOGY

Question:

Secondary treatment of sewage involves.

- | | |
|----------|--|
| A | Physical removal of large and small particles from sewage through filtration |
| B | Anaerobic sludge digestion |
| C | Sedimentation to remove smaller and larger particles |
| D | Mechanical agitation coupled with addition of aerobic microbes |

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Given below two statements: one is labelled as assertion A and the other is labelled as Reason R

Assertion A : In F_2 generation of a Mendelian cross, the traits seen in the progeny are identical to their parents

Reason R : The progeny of the F_2 generation in a Mendelian cross shows no blending of traits

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

- | | |
|---|--|
| A | Both A and R are correct and R is the correct explanation of A |
| B | Both A and R are correct but R is NOT the correct explanation of A |
| C | A is correct but R is not correct |
| D | A is not correct but R is correct |



Section Name:BIOLOGY

Question:

In flowering plants, the egg apparatus consists of:

- | | |
|----------|------------------------------------|
| A | three antipodals and one egg cell |
| B | two synergids and one central cell |
| C | two synergids and one egg cell |
| D | three antipodals and two synergids |

Section Name:BIOLOGY

Question:

Layers surrounding the ovum from outside to inside are

- A. Zona pellucida
- B. Vitelline membrane
- C. Corona radiata

Choose the correct answer from the options given below :

- | | |
|----------|-------|
| A | A,C,B |
| B | C,B,A |
| C | C,A,B |
| D | A,B,C |

Section Name: BIOLOGY

Question:

The term ribosome is applicable to the following molecule in bacteria

A mRNA

B 23 S rRNA

C 5S rRNA

D hn RNA

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Homo habilis	I.	Used hides to protect their body & buried their dead
B.	Dryopithecus	II.	Hunted with stone weapons but essentially ate fruits
C.	Australopithecines	III.	First human-like being
D.	Neanderthal man	IV.	Ape-like ancestor

Choose the correct answer from the options given below:

A A - I, B - II, C - III, D - IV

B A - III, B - IV, C - II, D - I

C A - IV, B - III, C - I, D - II

D A - II, B - I, C - IV, D - III

Section Name:BIOLOGY

Question:

After an HIV infection, the body of the patient starts becoming immunodeficient mainly due to :

- | | |
|---|---|
| A | the damage caused to secondary lymphoid organs |
| B | rapid multiplication of the virus out side the host cells |
| C | progressive decline in the number of helper T-lymphocytes |
| D | infection by a number of pathogens |



CUET 2022 QUESTION PAPER

Section Name:BIOLOGY

Question:

Bioactive molecules like statins are produced by :

A *Trichoderma polysporum*

B *Monascus purpureus*

C *Acetobacter aceti*

D *Streptococcus*

Section Name:BIOLOGY

Question:

The haplodiploid sex-determination system where all the males of the population are haploid and females are diploid, is seen in :

- | | |
|---|--------------|
| A | Drosophila |
| B | Honey bees |
| C | Birds |
| D | Grasshoppers |

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Genetic drift	I.	Change in allele frequency due to immigration & emigration
B.	Stabilising selection	II.	Change in gene frequency due to chance factor
C.	Gene flow	III.	More individuals acquire mean character value
D.	Saltation	IV.	Single step large mutation

Choose the correct answer from the options given below:

A A - I, B - II, C - III, D - IV

B A - III, B - I, C - II, D - IV

C A - I, B - III, C - IV, D - II

D A - II, B - III, C - I, D - IV

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Cowpea	I.	Tobacco mosaic virus
B.	Chilli	II.	Leaf and stripe rust
C.	Brassica	III.	Bacterial blight
D.	Wheat	IV.	White rust

Choose the correct answer from the options given below:

- A A - II, B - III, C - IV, D - I
- B A - I, B - II, C - III, D - IV
- C A - III, B - I, C - IV, D - II
- D A - IV, B - II, C - III, D - I

Section Name:BIOLOGY

Question:

What happened when heat-killed S cells along with live R cells were injected into mice in Griffith's experiment?

- | | |
|----------|--|
| A | Mice died and showed live R cells in the blood |
| B | Mice survived and showed live S cells in the blood |
| C | Mice died and showed live S cells in the blood |
| D | Mice survived and showed live R cells in the blood |

Section Name:BIOLOGY

Question:

Autotrophic microbe for fixing atmospheric nitrogen:

- | | |
|---|--------------|
| A | Rhizobium |
| B | Aspergillus |
| C | Oscillatoria |
| D | Trichoderma |

Section Name:BIOLOGY

Question:

In humans females at the time of birth, the stage of cell cycle of oocyte is :

- | | |
|----------|-------------|
| A | Prophase-I |
| B | Prophase-II |
| C | Meiosis-II |
| D | Mitosis |

Section Name:BIOLOGY

Question:

Calotropis, a weed growing in abandoned fields, produces one of the following biochemicals as a defense against grazers and browsers-

A Nicotine

B Opium

C Cardiac glycosides

D Strychnine

Section Name:BIOLOGY

Question:

Calculate the birth rate if there were 60 sparrows in a garden last year and through reproduction 24 new sparrows are added this year

- A 0.4 offsprings per sparrow per year
- B 0.2 offsprings per sparrow per year
- C 0.6 offsprings per sparrow per year
- D 0.1 offsprings per sparrow per year



Section Name:BIOLOGY

Question:

Totipotency can be defined as-

- | | |
|----------|---|
| A | Capacity to generate whole plant from any cell/explant |
| B | Capacity to survive in unfavourable environment condition |
| C | Ability to conduct water in 100 meter tall tree |
| D | The duration of dormancy of seeds & other propagules in angiosperms |

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Fig and wasp	I.	Competition
B.	Koel and crow	II.	Commensalism
C.	Balanus and Chathamalus	III.	Mutualism
D.	Egret and cattle	IV.	Brood parasitism

Choose the correct answer from the options given below:

A A - III, B - IV, C - I, D - II

B A - I, B - III, C - II, D - IV

C A - II, B - III, C - I, D - IV

D A - III, B - II, C - I, D - IV

CUET 2022 QUESTION PAPER

Question:

Match List I with List II

LIST I		LIST II	
A.	Sex-determination	I.	Vault
B.	Withdrawal	II.	Aminocontesis
C.	Barrier (physical)	III.	Syphilis
D.	Venereal diseases	IV.	Coitus interruptus

Choose the correct answer from the options given below:

- A A - I, B - II, C - IV, D - III
- B A - II, B - I, C - IV, D - III
- C A - II, B - IV, C - I, D - III
- D A - I, B - IV, C - II, D - III

Section Name:BIOLOGY

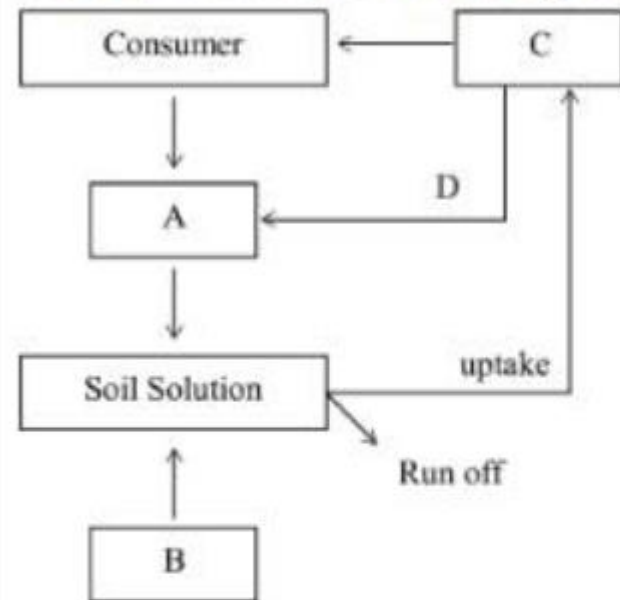
Question:

Restriction endonucleases are used as molecular _____

- | | |
|----------|--|
| A | molecular build up at nucleotides |
| B | molecular cement to join DNA sites |
| C | molecular knife cut DNA at specific site |
| D | molecular degradation to break up the DNA to nucleotides |

Question:

Given below is a simplified model of phosphorous cycle in terrestrial ecosystem with four blanks. Identify the blanks A, B, C and D.



- A A: Producer, B: litter fall, C: rock mineral, D: detritus
- B A: Rock minerals, B: Detritus, C: Litter fall D: producers
- C A: Litter fall, B: Producer, C: Rock minerals, D: Detritus
- D A: Detritus, B: Rock minerals C: producers, D: Litter fall

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I (Genes in lac operon)		LIST II (Products coded for)	
A.	i-gene	I.	β -galactosidase
B.	z-gene	II.	Transacetylase
C.	y-gene	III.	Repressor protein
D.	a-gene	IV.	Permease

Choose the correct answer from the options given below:

- A A - I, B - II, C - IV, D - III
- B A - III, B - I, C - IV, D - II
- C A - III, B - IV, C - II, D - I
- D A - I, B - II, C - III, D - IV

Section Name:BIOLOGY

Question:

Cohen and Boyer created the first recombinant DNA using plasmid of-

- | | |
|---|-------------------------------|
| A | <i>Escherichia coli</i> |
| B | <i>Thermus aquaticus</i> |
| C | <i>Salmonella typhimurium</i> |
| D | <i>Bacillus thuringiensis</i> |

CUET 2022 QUESTION PAPER

Section Name: BIOLOGY

Question:

Match List I with List II

LIST I		LIST II	
A.	Catalytic converter	I.	Solid wastes
B.	Electrostatic precipitator	II.	High noise level
C.	Earmuffs	III.	Particulate matter
D.	Land fills	IV.	Carbon monoxide and nitrogen oxide

Choose the correct answer from the options given below:

A A - II, B - III, C - I, D - IV

B A - I, B - IV, C - III, D - II

C A - IV, B - III, C - II, D - I

D A - III, B - IV, C - II, D - I

Question:

Identify the **correct** statements.

- A. Oogenesis is initiated at puberty
- B. Second meiotic division in secondary oocyte occurs in the ovary
- C. Middle piece of sperm provides energy for movement
- D. Fertilization of gametes occur in the ampulla isthmic region of oviduct
- E. Myometrium helps in muscular contractions of the uterus

Choose the correct answer from the options given below :

- | | |
|----------|------------|
| A | A,D,E only |
| B | A,B,D only |
| C | B,C,D only |
| D | C,D,E only |

Section Name: BIOLOGY

Question:

How many gametes will be formed in the pea plant having genotype RrTT?

- | | |
|---|-------|
| A | One |
| B | Two |
| C | Four |
| D | Eight |

Section Name:BIOLOGY

Question:

The detritus food chain (DFC) begins with:

- | | |
|----------|---------------------|
| A | Green plants |
| B | Carnivore |
| C | Dead organic matter |
| D | Herbivore |

Section Name:BIOLOGY

Question:

How many cycles in a PCR will be required for amplifying the genetic material to about one billion times?

A 10 cycles

B 15 cycles

C 30 cycles

D 35 cycles

Section Name:BIOLOGY

Question:

Gene of which one of the following is present exclusively on the x-chromosome in human being

- | | |
|---|--------------------------------|
| A | Thalassemia |
| B | Phenylketonuria |
| C | Red and green colour blindness |
| D | Sickle cell anaemia |



Section Name:BIOLOGY

Question:

Biofortification refers to :

- | | |
|----------|---|
| A | Sources of proteins for animal and human nutrition |
| B | Production of somatic hybrids |
| C | Use of mutation breeding |
| D | Breeding crops with higher levels of vitamins and minerals, or higher protein and healthier fat |

CASE STUDY

Some strain of *Bacillus thuringiensis* produce protein that kill certain insects such as lepidopterans (tobacco budworm, armyworm), coleopterans (beetles) and dipterans (flies, mosquitoes). *Bacillus thuringiensis* forms protein crystals during a particular phase of their growth. These crystals contain a toxic insecticidal protein. The Bt toxin proteins exist as inactive protoxins but once an insect ingests the inactive toxin, it is converted into an active form due to alkaline pH of the gut which solubilise the crystals.

Section Name: BIOLOGY

Question:

The Bt toxin acts on _____ of insect pest

- | | |
|---|---------------------|
| A | Hind gut |
| B | Nervous system |
| C | Reproductive system |
| D | Midgut |



Section Name:BIOLOGY

Question:

Some strains of *Bacillus thuringiensis* produce proteins that kill certain insects such as:

- | | |
|---|---|
| A | Grasshoppers and mosquitoes |
| B | Lepidopterans, coleopterans and dipterans |
| C | Coleopterans and nematodes |
| D | <i>Meloidegyne incognitia</i> |

Section Name:BIOLOGY

Question:

B. thuringiensis forms protein crystals during a particular phase of their growth. These crystals contain a toxic.

- | | |
|----------|----------------------|
| A | proteolytic enzymes |
| B | chitin |
| C | insecticidal protein |
| D | flavoprotein |



Section Name:BIOLOGY

Question:

Bt toxin exist as inactive protoxins, it is converted into an active form of toxin due to:

- | | |
|---|---------------------------------------|
| A | enzymes in insect's gut |
| B | acidic pH of the insect's gut |
| C | binding with collagen in insect's gut |
| D | alkaline pH of the insect's gut |



Section Name:BIOLOGY

Question:

The proteins encoded by the genes cryIAc and cryIIAb control:

- | | |
|----------|------------------|
| A | Corn borers |
| B | Cotton bollworms |
| C | Mosquitoes |
| D | Nematodes |

The biological wealth of our planet has been declining rapidly and the accusing finger is clearly pointing to human activities. The colonisation of tropical pacific islands by humans is said to have led to extinction of more than 2000 species of native birds. The IUCN red list documents the extinction of 784 species. Since the origin and diversification of life on earth, there were five episodes of mass extinction of species. Current species extinction rate as estimated to be 100-1000 times faster. There are four major causes called “The Evil quartet” Habitat loss, over exploitation, Alien species invasion & co-extinction. Conservation efforts are necessary to preserve biodiversity and protect endangered species and their habitats.



Section Name:BIOLOGY

Question:

Tissue culture and cryopreservation are the techniques used:

- | | |
|----------|--|
| A | In in-situ conservation |
| B | To control conservation of medicinal plants only |
| C | In ex-situ conservation method |
| D | Used in conventional breeding programmes |

Section Name:BIOLOGY

Question:

Mr. X wants to understand the 'Evil Quartet' to know the reasons of Biodiversity loss. It is :

- | | |
|----------|--|
| A | Habitat loss and fragmentation only |
| B | Over exploitation and Alien species invasions only |
| C | Co-extinctions and Alien-species invasion |
| D | Habitat loss, over exploitation, Alien species invasions and co-extinctions. |

Section Name:BIOLOGY

Question:

Which one of the following is NOT the reason for decline in biodiversity?

- | | |
|---|---------------|
| A | Pollution |
| B | Agriculture |
| C | Sacred groves |
| D | Fishing |

Section Name:BIOLOGY

Question:

Select the one which is NOT an ex-situ conservation of biodiversity:

- | | |
|----------|-------------------|
| A | Zoological parks |
| B | Botanical gardens |
| C | National parks |
| D | Seed banks |

Section Name: BIOLOGY

Question:

Identify the in-situ ways to conserve biodiversity from the following

- A. Zoological parks
- B. Eggs fertilised in-vitro
- C. Sacred groves
- D. Biosphere reserves

Choose the correct answer from the options:

- | | |
|---|-----------|
| A | A, B only |
| B | B, C only |
| C | C, D only |
| D | A, D only |