



Padalsalai's Telegram Groups!

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XII - STD	2019 - 2020	Marks : 50	1.00 : Hr.
ONE MARK	BIOLOGY		
TEST NO : 1	BIO - BOTANY (Marks : 25)	1. Asexual and Sexual Reproduction in plants. 3. Chromosomal Basis of Inheritance	

Choose the correct answer :

25 x 1 = 25

- The of anther may have polyploid cells.
(a) Microspore (b) Epidermis (c) Tapetum (d) Nucellus
- Due to incomplete linkage in maize, the ratio of parental and recombinants are
(a) 7 : 1 : 1 : 7 (b) 50 : 50 (c) 1 : 7 : 7 : 1 (d) 96 : 4 : 36
- Changing the codon AGC to AGA represents ? (a) Deletion mutation
(b) Missense mutation (c) Nonsense mutation (d) Frameshift mutation
- Who classified parthenocarpy ? (a) Maheswari, 1950
(b) Winkler, 1908 (c) Guignard, 1898 (d) Nitsch, 1963
- Adventitious buds on roots are seen in
(a) Pistia (b) Strawberry (c) Ipomoea (d) Agave
- Which of the following sentences are correct
1. The offspring exhibit only parental combinations due to incomplete linkage.
2. The linked genes exhibit some crossing over in complete linkage.
3. The separation of two linked genes are possible in incomplete linkage.
4. Crossing over is absent in complete linkage.
(a) 1 & 2 (b) 2 & 3 (c) 3 & 4 (d) 1 & 4
- How many map units separate two alleles A and B if the recombination frequency is 0.09 ?
(a) 9 cm (b) 900 cm (c) 90 cm (d) 0.9 cm
- The number of chromosomes in diploid cell of ophioglossum is
(a) 34 (b) 1262 (c) 48 (d) 1100
- The number of chromosomes in a diploid cell of Drosophila is
(a) 6 (b) 10 (c) 8 (d) 12
- Identify the correctly matched pair (a) Rhizome - Musa
(b) Stolon - Zingiber (c) Sucker - Pistia (d) Tuber - Allium cepa
- Pollen tube was discovered by
(a) J.G. Kolreuter (b) E. Strasburger (c) E. Hanning (d) G.B. Amici
- Match the following :
I : External Fertilization - i Pollen grain
II : Androecium - ii Anther wall
III : Male gametophyte - iii Algae
IV : Primary parietal layer - iv Stamens
(a) I - iv, II - i, III - ii, IV - iii (b) I - iii, II - iv, III - ii, IV - i
(c) I - iii, II - iv, III - i, IV - ii (d) I - iii, II - i, III - iv, IV - ii

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- The scar left by funiculus in the seed is
(a) tegmen (b) radicle (c) hilum (d) epicotyl
- New plants formed by asexual reproduction method are morphologically and genetically uniform and called as
(a) Spores (b) Buds (c) Gemma (d) Clones
- Match the following :
(a) Tristyly - (i) Primula
(b) Distyly - (ii) Vallisneria
(c) Anemophily - (iii) Lythrum
(d) Hydrophily - (iv) Eichhornia

	A	B	C	D
(a)	iv	i	ii	iii
(b)	ii	i	iii	iv
(c)	iii	i	iv	ii
(d)	i	iii	ii	iv
- Choose the incorrect statement : 'Hydrophily'.
(a) Pollination by wind (b) Pollination by water
(c) Epitydrophily is a type of hydrophily (d) Pollen grains can float
- Choose the incorrect pair
(a) caffeine - Comutagen
(b) uv ray - Mutagen
(c) monosomy - $2n + 1$
(d) Muller - Drosophila mutation
- Father of Indian green revolution
(a) M.S. Swaminathan (b) Hugo de Vries (c) Barbara Macintock (d) Morgan
- The first man made cereal
(a) Triticale (b) Maize (c) Pea (d) Nicotiana
- The Point mutation sequence for transition transition, transversion and transversion in DNA are
(a) A to T, T to A, C to G and G to C (b) G to C, A to T, T to A and C to G
(c) C to G, A to G, T to A and G to A (d) A to G, C to T, C to G and T to A
- Plant showing pollination by lever mechanism
(a) Arum (b) Apple (c) Areca catechu (d) Salvia
- Reproduction taking place without fusion of gametes
(a) Apomixis (b) Endosperm (c) Polyembryony (d) Syngams
- How do you call the fertilized ovule
(a) Seed (b) Endosperm (c) Embryo (d) Nutritive tissue
- Coelorrhiza is found on
(a) Bean (b) Pea (c) Tridax (d) Paddy
- Which of the following represent megagametophyte ?
(a) Ovule (b) Endosperm (c) Embryo sac (d) Nucellus

PTO

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BIO - ZOOLOGY (Marks : 25)

1. Reproduction in Organisms 2. Human Reproduction

Choose the correct answer :

25 x 1 = 25

- Exogenous buds are seen in
(a) Hydra (b) Frog (c) Amoeba (d) Vorticella
- Colostrum is rich in
(a) Ig E (b) Ig A (c) Ig D (d) Ig M
- Find the wrongly matched pair
(a) Bleeding phase - Fall in oestrogen and progesterone
(b) Ovulatory phase - LH surge
(c) Follicular phase - Rise in oestrogen
(d) Luteal phase - Rise in FSH level
- The whole process of spermatogenesis takes about days.
(a) 72 (b) 64 (c) 25 (d) 42
- is not linked to male reproductive system. (a) Corpus albicans
(b) Prostate gland (c) Cowper's gland (d) Bulbo urethral glands
- In which type of parthenogenesis are only males produced
(a) Thelytoky (b) Amphitoky (c) Arrhenotoky (d) Both a and b
- Animals giving birth to young ones :
(a) Oviparous (b) Viviparous (c) Ovoviviparous (d) Both a and b
- In which mode of reproduction variation are seen
(a) Asexual (b) Parthenogenesis (c) Sexual (d) Both a and b
- Transverse Binary fission is seen in
(a) Paramecium (b) Euglena (c) Vorticella (d) Plasmodium
- All the following animals are continuous breeders, except
(a) Poultry (b) Honey bees (c) Rabbit (d) Frogs
- Isogamy is observed in
(a) Mammals (b) Reptiles (c) Trichonympha (d) Monocystis
- Endogenous buds are seen in (a) Hydra (b) Noctiluca
(c) Trichonympha (d) Actinosphaerium
- refers to the fusion of small sized, morphologically different gametes ?
(a) Isogamy (b) Hologamy (c) Merogamy (d) Paedogamy

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- Division of cytoplasm is called
(a) Karyokinesis (b) Cytokinesis (c) Amphibians (d) Paedogamy
- Mammalian egg is
(a) Mesolecithal and non cleidoic (b) Microlecithal and non cleidoic
(c) Alecithal and cleidoic (d) Alecithal and non cleidoic
- The milk secreted by the mammary glands soon after child birth is called....
(a) Mucous (b) Lactose (c) Colostrum (d) Sucrose
- Which one of the following menstrual irregularities is correctly matched ?
(a) Oligomenorrhoea - Painful menstruation
(b) Menorrhagia - Excessive menstruation
(c) Dysmenorrhoea - Irregularity of menstruation
(d) Amenorrhoea - Absence of menstruation
- The mature sperms are stored in the (a) Seminiferous tubules
(b) Vas deferens (c) Epididymis (d) Seminal vesicle
- The foetal membrane that forms the basis of the umbilical cord is
(a) Amnion (b) Yolk sac (c) Allantois (d) Chorion
- The Androgen Binding Protein (ABP) is produced by
(a) Leydig cells (b) Hypothalamus (c) Pituitary gland (d) Sertoli cells
- Testosterone is secreted by
(a) Leydig cells (b) Spermatocytes (c) Sperm (d) Follicular bodies
- The dividing embryo takes days to move to the uterus from the fallopian tube.
(a) 10 (b) 15 (c) 2 (d) 4 - 5
- The mode of asexual reproduction in bacteria is by
(a) Formation of gametes (b) Endospore formation
(c) Conjugation (d) Zoospore formation
- The site of embryo implantation is the
(a) Uterus (b) Vagina (c) Fallopian tube (d) Peritoneal cavity
- The most important hormone in initiating and maintaining lactation after birth is
(a) Oestrogen (b) FSH (c) Prolactin (d) Oxytocin

XII-Std-Biology - O.M.T.-I

XII - STD ONE MARK TEST NO : 3	2019 - 2020		Marks : 50	1.00 : Hr.
	BIOLOGY			
	BIO - BOTANY (Marks : 25)		4. Principles and processes of Biotechnology 5. Plant Tissue culture	

Choose the correct answer :

25 x 1 = 25

- A property of plant cells enabling it to produce a entire plant from a tissue
(a) Redifferentiation
(b) Totipotency (c) Hardening (d) Dedifferentiation
- An example of a fusogen used in tissue culture ?
(a) Polyethylene glycol (b) Agar (c) Auxins (d) Explant
- Explant of sterile segment is selected from leaf for tissue culture.
(a) 1 - 3 cm (b) 1 - 4 cm (c) 1 - 2 cm (d) 1 - 1.5 cm
- The time duration for sterilization process by using autoclave is minutes and the temperature is
(a) 10 to 30 minutes and 125°C (b) 15 to 20 minutes and 125°C
(c) 10 to 20 minutes and 121°C (d) 15 to 30 minutes and 121°C
- Solidifying agent used in plant tissue culture is
(a) Nicotinic acid (b) Cobaltous chloride (c) EDTA (d) Agar
- An example of a biofortified crop
(a) Golden rice (b) Yeast (c) Cotton (d) Protein
- is a reconstructed plasmid.
(a) Ti plasmid (b) PBR 322 plasmid (c) Vectors (d) Jumping plasmid
- joins the sugar and phosphate molecules of double stranded DNA.
(a) DNA ligase (b) Alkaline phosphate (c) Endonuclease (d) Exonuclease
- Who discovered the double helix structure of DNA ? (a) Karl Ereky
(b) Smith and Nathans (c) Watson and Crick (d) Sangar and Gilbert
- EcoRI cleaves DNA at
(a) AGGGTT (b) GTATATC (c) TATAGC (d) GAATTC
- Plasmids are
(a) Circular protein molecules (b) Required by bacteria
(c) Tiny bacteria (d) Confer resistance to antibiotics
- Match the following :

Column A		Column B
1. Exonuclease	(a)	binding the DNA fragments
2. Endonuclease	(b)	add or remove phosphate
3. Ligase	(c)	cut the DNA at middle
4. Alkaline phosphatase	(d)	cut the DNA at terminus

- | | | | | |
|-------|---|---|---|-------|
| 1 | 2 | 3 | 4 | - 2 - |
| (A) c | d | a | b | |
| (B) a | b | c | d | |
| (C) d | b | a | c | |
| (D) a | d | b | c | |
- Which of the following one is used as a Biosensors ?
(a) Electrophoresis (b) Enzymes (c) Vectors (d) Bioreactors
 - An analysis of chromosomal DNA using the southern hybridisation technique does not use (a) Electrophoresis
(b) Blotting (c) Polymerase chain reaction (d) Auto radiography
 - Which one of the following palindromic base sequence in DNA can be easily cut at about the middle by some particular restriction enzymes
(a) 5' CGTTCG 3' 3' ATCGTA 5' (b) 5' GAATTC 3' 3' CTTAAG 5'
(c) 5' GATATG 3' 3' CTACTA 5' (d) 5' CACGTA 3' 3' CTCAGT 5'
 - An antibiotic gene is a vector usually helps in the selection of
(a) Transformed cells (b) Competent cells
(c) Recombinant cells (d) None of the above
 - E Coli have the full complement of enzymes for the glyoxylate and citric acid cycles in the
(a) Mesosomes (b) Mitochondria (c) Cytosol (d) Polysomes
 - Transcription requires
(a) Enzyme RNA polymerase (b) Ribonucleoside triphosphate
(c) DNA template (d) All of the above
 - Plasmids that can integrate into the bacterial DNA are called
(a) Plasmogenes (b) Neurogenes (c) Hydrogenes (d) Episomes
 - Protein that form chromatin with DNA is
(a) Histone (b) Actin (c) Myosin (d) Troponin
 - Who discovered penicillin
(a) Kohler (b) Karl Ereky (c) Milstein (d) Alexander Flemming
 - DNA ligase is isolated from
(a) E Coli (b) TMV (c) T₄ phage (d) Agrobacterium
 - used as biofertiliser and nitrogen fixers.
(a) Enzymes (b) Microbial inoculants (c) Biomass (d) Biofuels
 - Virus free plants are developed from (a) Meristem culture
(b) Protoplast culture (c) Organ culture (d) Cell suspension culture
 - Name the phenomenon of the reversion of mature cells to the meristematic state
(a) Redifferentiation
(b) Totipotency (c) Differentiation (d) Dedifferentiation (PTO)

Choose the correct answer :

25 x 1 = 25

- A 30 year old woman has bloody diarrhoea for the past 14 hours, which one of the following organisms is likely to cause this illness ?
(a) *Shigella dysenteriae* (b) *Salmonella enteritidis*
(c) *Clostridium difficile* (d) *Streptococcus pyogens*
- Paratope is an
(a) Antibody binding site on heavy regions
(b) Antibody binding site on variable regions.
(c) Antigen binding site on heavy regions
(d) Antigen binding site on variable regions
- Choose the correctly match pair
(a) LSD - Narcotic
(b) Amphetamines - Stimulant
(c) Benzodiazepine - Pain killer
(d) Heroin - Psychotropic
- AIDS virus has
(a) Single stranded DNA (b) Double stranded RNA
(c) Single stranded RNA (d) Double stranded DNA
- Find out the mismatched pair :

Group	Drugs
(a) Cannabis	- Morphine
(b) Depressant	- Tranquilizers
(c) Hallucinogens	- LSD
(d) Stimulants	- Cocaine
- is not a symptom of kala-azar.
(a) Anemia (b) Fever (c) Muscle spasms (d) Spleen enlargement
- World malaria day is celebrated on
(a) 25th May (b) 24th June (c) 15th August (d) 25th April
- The Neanderthal man had the brain capacity of
(a) 6500 CC (b) 1200 CC (c) 1400 CC (d) 900 CC
- Who proposed the Germplasm theory
(a) August Weismann (b) Darwin (c) Lamarck (d) Alfred Wallace
- Evolutionary history of an organism is called
(a) Phylogeny (b) Ancestry (c) Ontogeny (d) Paleontology
- The phenomenon of 'Industrial Melanism' demonstrates ?
(a) Induced mutation (b) Reproductive isolation
(c) Natural selection (d) Geographical isolation

- Choose the Hardy Weinberg equation
(a) $(p^2 + q^2) = P^2 + 2pq + q^2$ (b) $(p + q^2) = P^2 + 2pq + q^2$
(c) $(p + q) = P^2 + 4pq + q^2$ (d) $(p + q) = P^3 + 5pq + q^2$
- The solar system is estimated to be years old. (a) 4 billion years
(b) 4.5 trillion years (c) 6.4 billion years (d) 4.5 billion years
- Molecule which is used to study the evolution of respiratory pathway is (a) DNA (b) Cytochrome C (c) r RNA (d) RNA
- Identify the correct pair from the Below.
(A) Petrification - Impression
(B) Actual remains - Volcanic ash
(c) Tail in Baby - Atavism
(d) Homologous structures - Flippers of Dolphin
(a) A only (b) B and C (c) D only (d) A and B
- When lactose is present in the culture medium
(a) Transcription of lac Y, lac Z, a genes
(b) Repressor is unable to bind to the operator
(c) Repressor is able to bind to the operator
(d) Both (a) and (b) are correct
- The first codon to be deciphered was which codes for
(a) UUU, phenylalanine (b) AUA, proline (c) GGG, alanine (d) TTT, arginine
- A mRNA molecule is produced by
(a) Replication (b) Translation (c) Transcription (d) Duplication
- The total number of nitrogenous bases in human genome is estimated to be about
(a) 3.5 million (b) 3.1 billion (c) 35000 (d) 35 million
- Human Genome was sequenced in
(a) 1979 (b) 1989 (c) 2001 (d) 2018
- One gene one enzyme hypothesis was proposed by Beadle and Tatum based on
(a) Neurospora (b) Yeast (c) Drosophila (d) E - Coli
- The lagging strand of DNA has discontinuous fragments called ...
(a) Okazaki fragment (b) DNA helicase (c) Ribozyme (d) Nuclein
- The codon has dual function.
(a) UAA (b) UGA (c) UUU (d) AUG
- The published the book 'Origin of species by Natural Selection in' 1859....
(a) Lamarck (b) Weismann (c) Darwin (d) Hugo de vries
- The sporozoites of plasmodium vivax are formed from
(a) Gametocytes (b) Sporoblasts (c) Spores (d) Oocysts

XII - STD ONE MARK TEST NO : 4	2019 - 2020	Marks : 50	1.00 : Hr.
	BIOLOGY		
	BIO - BOTANY (Marks : 25)	6. Principles of Ecology 7. Ecosystem	

25 x 1 = 25**Choose the correct answer :**

- Which of the following are not regulating services of ecosystem services ?.....
(i) Genetic resources (ii) Recreation and aesthetic values
(iii) Invasion resistance (iv) Climatic regulation
(a) i (and) iii (b) ii (and) iv (c) i (and) iv (d) i (and) ii
- Solar energy used by green plants for photosynthesis is only
(a) 2 - 10% (b) 2 - 9% (c) 2 - 8% (d) 3 - 10%
- Ecosystem consists of
(a) consumers (b) decomposers (c) producers (d) all of the above
- Which of the following ecosystem has the highest primary productivity ?
(a) Pond ecosystem (b) Forest ecosystem
(c) Lake ecosystem (d) Grassland ecosystem
- Significance of food web is / are
(a) It does not maintain stability in nature
(b) It shows patterns of energy transfer
(c) It explains species interaction (d) b and c
- TDF stands for
(a) Total dry evergreen forests (b) Tamilnadu dry evergreen forests
(c) Tropical dry evergreen forests (d) Throughout dry evergreen forests
- Carbon stored in industrialized forests is called
(a) Black carbon (b) Brown carbon (c) Grey carbon (d) Green carbon
- PAR is between the range of
(a) 400 - 600 nm (b) 300 - 600 nm (c) 200 - 700 nm (d) 400 - 700 nm
- Identify the possible link 'A' in the following food chain :
Plant → Insect → Frog → 'A' → Eagle
(a) Cobra (b) Parrot (c) Rabbit (d) Eagle
- defined ecosystem as the structural and functional unit of ecology.
(a) Tansley (b) Forbes (c) Odum (d) Karl Mobius
- Meaning of the word 'Trophic'
(a) Green carbon (b) Psammosome (c) Limnology (d) To food or feeding
- Which of the following is called as partial stem parasites
(a) Opuntia (b) Viscum (c) Santalum (d) Cuscuta
- is not a True xerophyte.
(a) Argemone (b) Bryophyllum (c) Aloe (d) Nerium
- The term 'Ecology' was first proposed by
(a) R. Misra (b) Odum (c) Reiter (d) Ernest Haeckel
- The composition of oxygen in air is
(a) 24% (b) 35% (c) 21% (d) 78%
- Seeds germinating in the fruits of mother plant is known as
(a) Hydrochory (b) Aspospory (c) Vivipary (d) Mimicry
- is not an epiphyte.
(a) Orchid (b) Usnea (c) Tillandsia (d) Mimicry
- Petiole modified into leaf like structure
(a) Mimicry (b) Phylloclade (c) Phyllode (d) Halophytes
- Mutual association of an alga and fungus
(a) Cryophytes (b) Lichen (c) Heliophytes (d) Velamen
- Strong, sharp spines that get attached to animal's feet are found in the fruits of
(a) Echallium (b) Heritiera (c) Argemone (d) Crossandra
- Sticky glands of Boerhaavia and Cleome support
(a) Anemochory (b) Autochory (c) Hydrochory (d) Zoochory
- Ecology is the study of an individual species is called
(i) Community ecology (ii) Autecology
(iii) Species ecology (iv) Synecology
(a) i only (b) ii only (c) i (and) iv only (d) ii (and) iii only
- Mycorrhiza promotes plant growth by
(a) Serving as a plant growth regulators
(b) Helping the plant in utilizing atmospheric nitrogen
(c) Protecting the plant from infection (d) Absorbing inorganic ions from soil
- Ophrys an orchid resembling the female of an insect so as to be able to get pollinated is due to phenomenon of
(a) Myrmecophily (b) Ecological equivalents (c) Mimicry (d) None of these
- Choose the incorrect pair :
(a) March 21 - World forest day
(b) April 22 - Earth day
(c) May 22 - International Ozone day
(d) June 05 - World environment day

[PTO]

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BIO - ZOOLOGY
(Marks : 25)

8. Microbes in Human Welfare 9. Applications of Biotechnology
10. Organisms and Population

25 x 1 = 25

Choose the correct answer :

- Which of the following bacteria is used extensively as a bio-pesticide ?
(a) *Bacillus subtilis* (b) *Bacillus thuringiensis*
(c) *Lactobacillus acidophilus* (d) *Streptococcus lactis*
- The purpose of biological treatment of waste water is to
(a) Reduce sedimentation (b) Increase BOD
(c) Reduce BOD (d) Increase sedimentation
- Which of the following pair is correctly matched for the product produced by them
(a) *Saccharomyces cerevisiae* - Ethanol
(b) *Acetobacter aceti* - Antibiotics
(c) *Penicillium notatum* - Acetic acid
(d) *Methanobacterium* - Lactic acid
- Cry toxins obtained from *Bacillus thuringiensis* are effective against for
(a) Bollworms (b) Flies (c) Nematodes (d) Mosquitoes
- World Biofuel day is observed on
(a) 10th September (b) 22nd April (c) 17th October (d) 10th August
- Examples of single cell protein
(a) *Lactococcus* (b) *Nostoc* (c) *Peziza* (d) *Spirulina*
- The first clinical gene therapy was done for the treatment of
(a) AIDS (b) Cancer (c) Cystic fibrosis (d) SCID
- Transgenic animals are those which have
(a) Foreign RNA in all their cells (b) Foreign DNA in all their cells
(c) Foreign RNA in some of their cells (d) Foreign DNA in some of their cells
- PCR proceeds in three distinct steps governed by temperature they are in order of
(a) Synthesis, Annealing, Denaturation (b) Denaturation, Annealing, synthesis
(c) Annealing, synthesis, Denaturation (d) Denaturation, synthesis, Annealing
- Dolly the sheep was obtained by a technique known as
(a) Cloning by gene transfer (b) Cloning without the help of gametes
(c) Cloning by nuclear transfer (d) Cloning by tissue culture of somatic cells
- Recombinant Factor VIII is produced in the cells of the Chinese Hamster. (a) Liver cells (b) Blood cells (c) Ovarian cells (d) Brain cells
- ELISA is mainly used for (a) Detection of pathogens
(b) Detection of mutations (c) Selecting animals having desired traits
(d) Selecting plants having desired traits

- 4 -

- The first synthetic vaccine produced was ..
(a) DPT (b) Measles (c) Polio (d) HbsAg
- Using recombinant *E. Coli*, mass production of hGH is carried out by
(a) biotechnology (b) recombinant DNA
(c) Genetic engineering (d) Fermentation technology
- Most popular sources of stem cells from their bank
(a) Amniotic cell bank (b) Placenta blood bank
(c) amniotic fluid cell bank (d) Cord blood bank
- Match the following :
1. PCR - (a) Handicrafts
2. GI - (b) Molecular pharming
3. Edible vaccine - (c) Blood cells
4. Multipotency - (d) RNA amplification
(a) 1 - c 2 - a 3 - b 4 - c (b) 1 - a 2 - b 3 - c 4 - d
(c) 1 - b 2 - a 3 - d 4 - a (d) 1 - d 2 - a 3 - b 4 - c
- Which of the following is an r - species
(a) Human (b) Insects (c) Rhinoceros (d) Whale
- Predation and parasitism are which type of interactions
(a) (+, +) (b) (+, 0) (c) (+, -) (d) (-, -)
- Competition between species leads to
(a) Mutations (b) Symbiosis (c) Extinction (d) Amensalism
- The relationship between sucker fish and shark is
(a) Competition (b) Predation (c) Commensalism (d) Parasitism
- Which of the following is correct for r - selected species
(a) Small number of progeny with large size
(b) Small number of progeny with small size
(c) Large number of progeny with small size
(d) Large number of progeny with large size
- Some organisms are able to maintain homeostasis by physical means ?....
(a) Migrate (b) Conform (c) Regulate (d) Suspend
- "Birds and mammals attain greater body size in colder regions than warmer regions". Choose the correct option (a) Jordon's rule
(b) Sewall wright effect (c) Bergmann's rule (d) Allen's rule
- Scientist who coined the term 'Niche'
(a) Eikos (b) Van't Hoff (c) Jordon (d) Charles Elton
- Animals that can move from fresh water to sea called as
(a) Stenothermal (b) Eurythermal (c) Anadromous (d) Catadromous

XII - STD	2019 - 2020	Marks : 50	1.00 : Hr.
ONE MARK	BIOLOGY		
TEST NO : 5	BIO - BOTANY (Marks : 25)	8. Environmental Issues 9. Plant Breeding 10. Economically Useful Plants and Entrepreneurial Botany	

Choose the correct answer :

25 x 1 = 25

- One green house gas contributes 14% of total global warming and another contributes 6%. These are respectively identified as
(a) N_2O and CO_2 (b) CH_4 and CO_2 (c) CFCs and N_2O (d) CH_4 and CFCs
- The unit for measuring ozone thickness
(a) Dobson (b) Joule (c) Kilos (d) Watt
- People's movement for the protection of environment in Sirsi of Karnataka is
(a) Chipko movement (b) Appiko movement
(c) Amirtha Devi Bishwas movement (d) None of the above
- TAP stands for
(a) Tamil Nadu Administration Project (b) Tamil Nadu Achievement Project
(c) Tamil Nadu Agrochemical Project (d) Tamil Nadu Afforestation Project
- is the most damaging type of UV radiation.
(a) UV A (b) UV B (c) UV H (d) UV C
- Tree cultivation in private lands was implemented in the state from
(a) 2003 - 09 to 2012 (b) 2007 - 08 to 2011
(c) 2002 - 03 to 2011 (d) 2004 - 05 to 2010
- The satelliteto used for border surveillance.
(a) INSAT 3DR (b) SCATSAT - I (c) CARTOSAT - 2 (d) GSAT - 6A
- Dwarfing gene of wheat is
(a) Pal 1 (b) Atomita - 1 (c) Pelita - 2 (d) Norin 10
- Which of the following is incorrectly (a) Wheat - Himgiri
(b) Pusa Komal - Brassica (c) Rice - Ratna (d) Milch breed - Sahiwal
- Jaya and Ratna are the semi dwarf varieties of
(a) Wheat (b) Cowpea (c) Mustard (d) None of these above
- Find out the correctly matched pair :
(a) Rubber - Shorea robusta (b) Timber - Cyperus papyrus
(c) Dye - Lawsonia inermis (d) Pulp - Hevea brasiliensis
- Tectona grandis is coming under family
(a) Lamiaceae (b) Fabaceae (c) Dipterocarpaceae (d) Ebenaceae
- Who introduced the concept of gene interaction
(a) Erich (b) Carl Correns (c) W.Bateson (d) Hugo De vries

- 2 -

- Statement A : Coffee contains caffeine
Statement B : Drinking coffee enhances cancer
(a) A is correct, B is wrong (b) A and B - Both are correct
(c) A is wrong, B is correct (d) A and B - Both are wrong
- The only cereal that has originated and domesticated from the New world.....
(a) Oryza sativa (b) Zea mays (c) Triticum aestivum (d) Triticum durum
- Finger millet refers to
(a) Ragi (b) Little millet (c) Kodo millet (d) Foxtail millet
- The king of spices
(a) Cardamom (b) Bananas (c) Pepper (d) Fruit
- Pulses belongs to family
(a) Poaceae (b) Amaranthaceae (c) Verbenaceae (d) Fabaceae
- is the only cereal which has originated and domesticated from the new world. (a) Paddy (b) Wheat (c) Maize (d) Millet
- Tamarindus indica is indigenous to
(a) Tropical African region (b) South India, Sri Lanka
(c) South America, Greece (d) India alone
- New world species of cotton (a) Gossypium arboreum
(b) Gossypium herbaceum (c) Both a and b (d) G. barbadense
- Which one of the following matches is correct ?
(a) Falunrya - Native of Brazil
(b) Stevioloside - Natural sweetener
(c) Saccharum - Abundant in Kanya Kumari
(d) Palmyra sap - Fermented to give ethanol
- Choose the correct pair
(a) Bio priming - Planting seed (b) Green manure - Sesbania
(c) Liquid seaweed - Artificial fertilizer (d) Biopesticides - Anabaena
- Match Column I with Column II

Column I	Column II
(i) William S. Gaud	(i) Heterosis
(ii) Shull	(ii) Mutation breeding
(iii) Cotton Mather	(iii) Green revolution
(iv) Muller and Stadler	(iv) Natural hybridization
(a) i - I, ii - II, iii - III, iv - IV	(b) i - III, ii - I, iii - IV, iv - II
(c) i - IV, ii - II, iii - I, iv - IV	(d) i - II, ii - IV, iii - III, iv - I
- Which one of the following is a plant growth promoting Rhizobacteria
(a) Bacillus (b) Pseudomonas (c) Penicillium (d) Amanita

[PTO]

- 3 -

BIO - ZOOLOGY
(Marks : 25)

11. Biodiversity and its conservation
12. Environmental Issues

25 x 1 = 25

Choose the correct answer :

- Ozone is found in the layer of the atmosphere.
(a) Ionosphere (b) Thermosphere (c) Mesosphere (d) Stratosphere
- Match the following :
1. DEET - (a) Drycomposting
2. Ecoson - (b) Nondegradable
3. PCB - (c) Organic farming
4. Vermicompost - (d) Allergen
- Incineration is the best method to dispose
(a) Medical waste (b) Sewage (c) Oil spills (d) Agricultural waste
- The tolerable level of sound is
(a) 140 db (b) 120 db (c) 100 db (d) 220 db
- SMOG is derived from
(a) Smoke (b) Fog (c) Both A and B (d) Only A
- In the E -waste generated by the mobile phones, which among the following metal is most abundant ?
(a) Silver (b) Palladium (c) Copper (d) Gold
- Right to Clean Water is a fundamental right, under the Indian constitution
(a) Article 12 (b) Article 41 (c) Article 31 (d) Article 21
- The thickness of stratospheric ozone layer is measured in/on
(a) Dobson units (b) Melson units (c) Sieverts units (d) Beaufort Scale
- With which of the following the Agenda 21, of Rio Summit 1992, is related to
(a) Combating the consequences of population
(b) Sustainable development (c) Technology transfer mechanism to developing countries for clean energy production
(d) Mitigation norms of greenhouse gases emission
- Excess of fluoride in drinking water causes (a) Lung disease
(b) Fluorosis (c) Intestinal infection (d) None of the above

- 4 -

- As per 2017 statistics, the highest per capita emitter of carbon dioxide in the world is
(a) USA (b) Qatar (c) Saudi Arabia (d) China
- Red list has categories. (a) 8 (b) 7 (c) 6 (d) 12
- There are mega biodiversity countries in the world.
(a) 15 (b) 12 (c) 17 (d) 10
- Which of the following is considered a hotspots of biodiversity in India ...
(a) Indo - gangetic plain (b) Western ghats
(c) Eastern Himalaysis (d) b and c
- Conservation of biodiversity with in their natural habitat is
(a) In vitro conservation (b) Insitu conservation
(c) Exsitu conservation (d) In Vivo conservation
- The organization which published the red list of species is
(a) WWF (b) ZSI (c) UNEP (d) IUCN
- Which of the following region has maximum biodiversity
(a) Taiga (b) Tropical forest (c) Mangroves (d) Temperate rainforest
- Who introduced the term biodiversity
(a) Walter Rosen (b) Alice Norman (c) Edward Wilson (d) Norman Myers
- Which one of the following is not coming under insitu conservation ?
(a) Zoological park (b) Natural park (c) Biosphere reserve (d) Sanctuaries
- Project tiger was first launched in
(a) 1978 (b) 1999 (c) 2000 (d) 1973
- Death of population is attributed to the medicine Diclofenac.
(a) Sparrow (b) Squirrel (c) Deer (d) Vulture
- Mundanthurai wild life sanctuary is located in district.
(a) Tirunelveli (b) Dharmapuri (c) Salem (d) Kancheepuram
- Kaziranga in Assam refers to a (a) Protected areas
(b) Wild life sanctuary (c) National park (d) Both a and c
- Which among the following always decreases in a food chain across tropic levels
(a) Force (b) Energy (c) Number (d) Accumulated chemicals
- International Day for preservation of ozone layer
(a) May 25 (b) April - 8 (c) September 16 (d) July - 8

XII-Std-Biology - O.M.T.-5

XII - STD -ONE MARK TEST - KEYS, 2019 - 2020**BIOLOGY****KEYS TEST NO : 1**

BIO-BOTANY : 1. (c) 2. (a) 3. (b) 4. (d) 5. (c) 6. (c) 7. (a) 8. (b) 9. (c) 10.(a)
 11. (d) 12. (c) 13. (c) 14.(d) 15.(c) 16.(a) 17.(c) 18.(a) 19.(a) 20.(d)
 21. (d) 22. (a) 23.(c) 24.(d) 25.(c)

BIO-ZOOLOGY : 1. (a) 2. (b) 3. (d) 4. (b) 5. (a) 6. (c) 7. (b) 8. (c) 9. (a) 10.(d)
 11. (d) 12. (b) 13.(c) 14.(b) 15.(d) 16.(c) 17.(d) 18.(c) 19.(c) 20.(d)
 21. (a) 22. (d) 23.(b) 24.(a) 25.(c)

KEYS TEST NO : 2

BIO-BOTANY: 1. (d) 2. (c) 3. (a) 4. (b) 5. (b) 6. (a) 7. (a) 8. (c) 9. (d) 10.(a)
 11. (c) 12. (b) 13.(b) 14.(d) 15.(a) 16.(a) 17.(d) 18.(c) 19.(d) 20.(c)
 21. (a) 22. (d) 23.(c) 24.(b) 25.(d)

BIO-ZOOLOGY : 1. (c) 2. (b) 3. (a) 4. (d) 5. (b) 6. (b) 7. (d) 8. (d) 9. (b) 10.(d)
 11. (d) 12. (d) 13.(b) 14.(a) 15.(c) 16.(a) 17.(c) 18.(b) 19.(b) 20.(d)
 21. (c) 22. (c) 23.(b) 24.() 25.(d)

KEYS TEST NO : 3

BIO-BOTANY: 1. (b) 2. (a) 3. (c) 4. (d) 5. (d) 6. (a) 7. (b) 8. (a) 9. (a) 10.(b)
 11. (d) 12. (a) 13.(b) 14.(c) 15.(b) 16.(a) 17.(c) 18.(d) 19.(c) 20.(a)
 21. (d) 22. (c) 23.(b) 24.(a) 25.(d)

BIO-ZOOLOGY : 1. (a) 2. (d) 3. (b) 4. (c) 5. (a) 6. (c) 7. (d) 8. (c) 9. (a) 10.(a)
 11. (c) 12. (b) 13.(d) 14.(b) 15.(d) 16.(d) 17.(a) 18.(c) 19.(b) 20.(c)
 21. (a) 22. (a) 23.(d) 24.(a) 25.(d)

KEYS TEST NO : 4

BIO-BOTANY: 1. (d) 2. (a) 3. (d) 4. (b) 5. (d) 6. (c) 7. (b) 8. (d) 9. (a) 10.(c)
 11. (d) 12. (b) 13.(a) 14.(c) 15.(c) 16.(c) 17.(a) 18.(c) 19.(b) 20.(c)
 21. (d) 22. (d) 23.(d) 24.(c) 25.(c)

BIO-ZOOLOGY : 1. (b) 2. (c) 3. (a) 4. (a) 5. (d) 6. (d) 7. (c) 8. (b) 9. (b) 10.(c)
 11. (c) 12. (a) 13.(d) 14.(b) 15.(d) 16.(d) 17.(b) 18.(c) 19.(c) 20.(c)
 21. (c) 22. (a) 23.(c) 24.(d) 25.(d)

KEYS TEST NO : 5

BIO-BOTANY: 1. (c) 2. (a) 3. (b) 4. (d) 5. (d) 6. (a) 7. (c) 8. (d) 9. (b) 10.(d)
 11. (c) 12. (a) 13.(c) 14.(a) 15.(b) 16.(a) 17.(c) 18.(d) 19.(c) 20.(a)
 21. (d) 22. (b) 23.(b) 24.(b) 25.(b)

BIO-ZOOLOGY : 1. (d) 2. 1-d, 2-a, 3-b, 4-c 3. (a) 4. (b) 5. (c) 6. (c) 7. (d) 8. (a) 9. (a) 10.(b)
 11. (d) 12. (a) 13.(c) 14.(d) 15.(b) 16.(d) 17.(b) 18.(a) 19.(a) 20.(d)
 21. (d) 22. (a) 23.(d) 24.(b) 25.(c)

XII-STD ONE MARK TEST NO: 2	2019 - 2020		Marks : 50	1.00 : Hr.
	BIOLOGY			
	BIO - BOTANY (Marks : 25)	2. Classical Genetics		

25 x 1 = 25

Choose the correct answer :

- The dominant epistatis ratio is
(a) 9 : 3 : 3 : 1 (b) 9 : 6 : 1 (c) 9 : 3 : 4 (d) 12 : 3 : 1
- How many different types of gametes will be produced by a plant having the genotype AABbCC ?
(a) Three (b) Nine (c) Four (d) Two
- In genotype of a plant showing the dominant phenotype can be determined by
(a) Test cross (b) Back cross (c) Dihybrid cross (d) Pedigree analysis
- 'Gametes are never hybrid' This is a statement of
(a) Law of dominance (b) Law of segregation
(c) Law of independent assortment (d) Law of random fertilization
- Select the period for Mendel's hybridization experiments
(a) 1850 - 1870 (b) 1856 - 1863 (c) 1857 - 1869 (d) 1870 - 1877
- Gene interaction concept was introduced and explained by
(a) W. Bateson (b) Hugo de Vries (c) Carl Correns (d) Erich
- The gene for tall pea plant is related with ...
(a) gibberellins (b) apical dominance (c) Auxins (d) Dwarfism
- Identify the back cross
(a) TT X tt (b) Tt X Tt (c) Tt X tt (d) TT X TT
- The ratio is seen in inhibitory gene interaction.
(a) 9 : 3 : 4 (b) 9 : 6 : 1 (c) 13 : 3 (d) 9 : 7
- Choose the correct pair
(a) Dihybrid ratio - 9 : 3 : 3 : 1
(b) Dihybrid cross - Snapdragon
(c) Monohybrid cross - Sex dependent
(d) Recessive back cross - Dihybrid cross
- Functional units of inheritance
(a) Heredity (b) Factors (c) Genes (d) Gametes
- Reappearance of ancestral trait after being lost in previous generations ...
(a) Alleles (b) Atavism (c) Pleiotropy (d) Sickle cell anaemia

- 2 -

- ABO blood group in human is an example of
(a) incomplete dominance (b) co dominance
(c) dominant epistasis (d) complementary gene interaction
- A self fertilizing trihybrid plant forms 8 different gametes and different zygotes.
(a) 60 (b) 58 (c) 46 (d) 64
- Genetics is described as a science which deals with
(a) Heredity and Variation (b) Discontinuous Variation
(c) Continuous variation (d) None of the above
- The term is the genetic constitution of an individual.
(a) genotype (b) phenotype (c) hybrids (d) alleles
- In order to find out the different types of gametes produced by a pea plant having the genotype AaBb, it should be crossed to a plant with the genotype
(a) aaBB (b) AaBB (c) AABB (d) aabb
- Which one of the following is an example for polygenic inheritance
(a) Flower color in Mirabilis jalapa (b) Production of male honey bee
(c) Skin color in humans (d) Pod shape in garden pea
- In his classic experiment on Pea plants, Mendel did not use
(a) Pod length (b) Seed color (c) Seed shape (d) Flowering position
- Which Mendelian idea is depicted by a cross in which F₁ generation resembles both the parents
(a) Incomplete dominance
(b) Law of dominance (c) Co - dominance (d) Inheritance of one gene
- Among the following characters which one was not considered by Mendel in his experimentation pea ?
(a) Trichomal glandular or non - glandular (b) Pod - Inflated or constricted
(c) Stem - tall or dwarf (d) Seed Green (or) yellow
- RRYY is
(a) Dominant (b) Recessive (c) Heterozygous (d) Homozygous
- Carl correns's used for his experiment.
(a) Pea plant (b) Pisum sativum (c) 4 O'clock (d) Snake dragon
- Deals with the structure and function of a gene
(a) Population Genetics (b) Molecular Genetics
(c) Classical Genetics (d) Quantitative Genetics
- SBEI stands for
(a) Starch Based Enzyme (b) Starch Bound Enzyme
(c) Starch Bilayer Enzyme (d) Starch Branching Enzyme

PTO

XII. STD

2019 - 2020

Marks : 50

1.00 : Hr.

15. Father of Social

- 2 -

- 3 -

BIO - ZOOLOGY (Marks : 25) 3. Reproductive Health 4. Principles of inheritance and variation

25 x 1 = 25

Choose the correct answer :

- is observed as world population day.
(a) 11th June (b) 11th April (c) 11th July (d) 11th May
- One of the following prevents sperm from heading off to penis as the discharge has no sperms in it
(a) Tubectomy (b) Vasectomy (c) LNG - 20 (d) Cu T 380 Ag
- At which stage the embryo is transferred into the uterus
(a) 8 celled stage (b) 4 celled stage (c) 12 celled stage (d) 16 celled stage
- ZW - ZZ system of sex determination occurs in
(a) Birds (b) Reptiles (c) Fishes (d) All of these
- Patau's syndrome is also referred to as
(a) 18 - Trisomy (b) 13 - Trisomy (c) 21 - Trisomy (d) None of these
- Which of the following phenotypes in the progeny are possible from the parental combination A x B ?
(a) A and B only (b) A, B, AB and O (c) A, B and AB only (d) AB only
- Mangelsism is a genetic disorder which is caused by the presence of an extra chromosome number ...
(a) 20 (b) 4 (c) 23 (d) 21
- Females with Tumors syndrome have (a) Underdeveloped breasts
(b) Small uterus (c) Rudimentary ovaries (d) All of these
- Klinefelters' syndrome is characterized by a karyotype of
(a) XXY (b) XYY (c) XO (d) XXX
- XO type of sex determination and XY type of sex determination are example of
(a) Female heterogamety (b) Male heterogamety (c) Male homogamety (d) Both (b) and (c)
- Sex switch genes have been reported in
(a) Grasshopper (b) Cockroach (c) Wasp (d) Drosophila
- R_h factor was discovered in the blood of
(a) Frog (b) Carp (c) Calotes (d) Rhesus monkey

- 4 -

- Phenylketonuria is linked to chromosome
(a) 9 (b) 12 (c) 10 (d) 11
- The problem of overpopulation can be overcome by (a) Birth control
(b) Awareness program (c) Free education (d) Meals scheme
- is needed for normal functioning of reproductive structures ?
(a) Vitamin A (b) Vitamin B (c) Vitamin E (d) Vitamin C
- The family planning programme was initiated by India in
(a) 1951 (b) 1955 (c) 1956 (d) 1988
- Test tube baby is got by technique.
(a) IUI (b) CVS (c) IVF (d) ICSI
- PAP smear can help to detect
(a) Jaundice (b) Cancer (c) AIDS (d) Hepatitis B
- The incubation period for can be more than 10 years.
(a) HBV (b) HIV (c) HPV (d) Treponema
- Expansion of the RCH is
(a) Reproduction and Children Health Programme.
(b) Reproductive and Child's Health Committee
(c) Reproductive and Child Health Care.
(d) Reproduction and Critical Health Care.
- This technique is used to diagnose the chromosomal abnormalities
(a) GIFT (b) Micro Testicular Sperm Extraction
(c) Amniocentesis (d) Assisted Reproductive Technology (ART)
- Who is the founder of Modern Eugenics movement ?
(a) Mendel (b) Darwin (c) Francis Galton (d) Karl Pearson
- Co - dominant blood group is
(a) A (b) AB (c) O (d) B
- ABO blood group in man is controlled by (a) Multiple alleles
(b) Sex linked genes (c) Y - linked genes (d) Lethal genes
- Father of a child is colourblind and mother is carrier for colourblindness, the probability of the child being colour blind is
(a) 25% (b) 100% (c) 75% (d) 50%