

MCQ CLASS XII BIOLOGY

1. . _____ introduced into Lake Victoria caused extinction of 200 species of cichlid fishes. a) Nile perch b) African cat fish c) flamingo d) Pisaster
2. The extinction of passenger pigeon was due to
(a) increased number of predatory birds.
(b) over exploitation by humans.
(c) non-availability of the food.
(d) bird flu virus infection.
3. Biolistics (gene gun) is suitable for
(a) introducing rDNA into plant cells
(b) introducing rDNA into animal cells
(c) disarming the pathogen vectors
(d) DNA fingerprinting.
4. . Plasmids in bacterial cells are
(a) extra-chromosomal DNA, which cannot replicate
(b) extra-chromosomal DNA, which can self-replicate
(c) extra DNA associated with the genome
(d) extra DNA, associated with the genome, but cannot replicate.
5. Which among the following is based on antigen-antibody interaction?
(a) PCR
(b) Electrophoresis
(c) ELISA
(d) All of these.
6. The DNA polymerase enzyme used in PCR is obtained from
(a) *Thermusaquaticus*
(b) *Escherichia coli*
(c) *Agrobacterium tumefaciens*
(d) *Salmonella typhimurium*
7. The last stable community in succession that is in equilibrium with the environment, is called
(a) serai community
(b) pioneer community
(c) climax community
(d) all of these
8. Which of the following ecosystems is most productive in terms of net primary production?
(a) Deserts
(b) Tropical rain forests
(c) Oceans
(d) Estuaries

9. Niche is defined as

- (a) a component of an ecosystem
- (b) an ecologically adapted zone of a species
- (c) the physical position and functional role of a species within the community
- (d) all plants and animals living at the bottom of a water body.

10. A population has more young individuals compared to the older individuals. What would be the status of the population after some years?

- (a) It will decline
- (b) It will stabilise
- (c) It will increase
- (d) It will first decline and then stabilise

Answers

- 1. A
- 2. B
- 3. A
- 4. B
- 5. C
- 6. A
- 7. C
- 8. B
- 9. C
- 10. C

- 1. Viral disease-free plants are obtained through
 - (a) anther culture.
 - (b) shoot meristem culture.
 - (c) ovary culture.
 - (d) leaf-cell culture
- 2. . Which among the following is not allowed to take place in the case of RNA interference employed in making tobacco plants resistant to the nematode, *Meloidogyne incognita*?
 - (a) Transcription of mRNA
 - (b) Translation of mRNA
 - (c) Replication of DNA
 - (d) Maturation of hn RNA.
- 3. . From his long term ecosystem experiments, David Tilman showed that
 - (a) decreased diversity contributed to higher productivity
 - (b) decreased diversity contributed to decreased productivity
 - (c) increased diversity contributed to increased productivity
 - (d) increased diversity contributed to decreased productivity
- 4. Choose the odd man out-
Parasitism, Predation, Commensalism, Amensalism.
- 5. . The sequence of communities of primary succession in water is
 - (a) phytoplankton, sedges, free-floating hydrophytes, rooted

- hydrophytes, grasses and trees.
 (b) phytoplankton, free-floating hydrophytes, rooted hydrophytes, sedges, grasses and trees.
 (c) free-floating hydrophytes, sedges, phytoplankton, rooted hydrophytes, grasses and trees.
 (d) phytoplankton, rooted submerged hydrophytes, floating hydrophytes, reed swamp, sedges, meadow and trees.
6. In an experiment, recombinant DNA bearing ampicillin-resistance gene is transferred into E.coli cells. The host cells are then cultured on a medium containing ampicillin. The result will be
 (a) both transformants and non-transformants cannot survive.
 (b) both transformants and non-transformants can survive.
 (c) transformants only and not the non-transformants can survive.
 (d) transformants cannot survive, but non-transformants can not.
7. Choose the odd man out-
 Fragmentation, Stratification, Leaching, Catabolism.
8. Pick the odd man out-
 Tetanus toxoid, a-1 antitrypsin, Hepatitis B vaccine, Humulin
9. . Which of the following steps are catalysed by Taq polymerase in a PCR reaction?
 (a) Denaturation of template DNA
 (b) Annealing of primers to template DNA
 (c) Extension of primer end on the template DNA
 (d) All of the above
10. Pick the odd man out-
 Seed banks, Tissue culture, Sacred groves, Cryopreservation

ANSWERS

1. B
2. B
3. C
4. Amensalism
5. D
6. C
7. Stratification
8. Tetanus toxoid
9. C
10. Sacred groves

KENDRIYA VIDYALAYA PANGODE

Biology MCQ

1. What would happen if corpus luteum is not degenerated?

(a) Progesterone will not be secreted (b) Endometrium will disintegrate (c) Proliferation of endometrium will take place (d) Ovulation will take place

2. Klinefelter syndrome has the genetic make up

(a) 44 autosomes + xxy (b) 44 autosomes + xo (c) 45 autosomes + xx (d) 45 autosomes + xy

3. "Cleistogamous flowers are invariably autogamous because"

(a) These flowers do not open at all. (b) There is no chance of cross – pollen landing on the stigma. (c) These flowers have exposed anthers and stigma. (d) These flowers are wind pollinated.

4. Which of the following statements is correct?

(a) Surgical methods of contraception does not prevent gamete formation (b) In E.T techniques, embryos are always transferred into the uterus (c) Oral pills are very popular contraceptives among the rural women (d) All STDs are not completely curable.

5. Non coding sequences present within a gene are called:

(a) Exon (b) Operon (c) Promoter (d) Intron

6. Which of the following DNA sequences would a Restriction enzyme recognize and cut?

(a) ATGCAC TACGTG (b) GATATC CTATAG (c) TAGATA ATCTAT (d) AATATA TTATAT

7.

7. The conditions of the earth atmosphere conducive for the origin of life were:

(a) Presence of high temperature, CH₄, NH₃, and O₃ (b) High temperature, CH₄, NH₃, volcanic eruption (c) High temperature, volcanic eruption, O₂, NH₃ (d) Volcanic eruption, CH₃, NH₃ and O₂

8. To analyze the genotype of an organism, it is made to

(a) Self cross (b) Cross with recessive parent (c) Cross with dominant parent (d) Cross with another species

9. An inverted Pyramid of biomass is represented by (a) Aquatic ecosystem (b) ecosystem of a big tree (c) grassland ecosystem (d) tropical fresh ecosystem.

10. Gene therapy can be used to correct one of the following

(a) Defective ADA (b) Lack of B-Lymphocytes (c) Defective Immunoglobulin (d) Lack of T-Lymphocytes

KENDRIYA VIDYALAYA, CRPF, PALLIPURAM

CLASS: XII

SUBJECT: BIOLOGY

MULTIPLE CHOICE QUESTIONS

| | |
|---|--|
| 1 | <p>An example of a monoecious plant is:</p> <ul style="list-style-type: none">a) Tomatob) Rosec) Cucumberd) Shoe flower <p style="text-align: right;">ANS. c</p> |
| 2 | <p>The basal cell in a zygote of angiosperm :</p> <ul style="list-style-type: none">a) Develops into the roots of the embryob) Forms the suspensor that anchors the embryo and transfers nutrientsc) Results from the fertilization of polar and sperm nuclei and develops into the endospermd) Divides to form the two cotyledons of the proembryo <p>ANS: b</p> |
| 3 | <p>Which of the following hormones is more directly associated with the maintenance of pregnancy?</p> <ul style="list-style-type: none">a) Estrogenb) Progesteronec) LHd) FSH <p>ANS: b</p> |
| 4 | <p>Identify from the following sexually transmitted diseases which does not specifically affect the sex organs.</p> <ul style="list-style-type: none">a) AIDSb) Gonorrhoeac) Genital herpesd) Trichomoniasis <p>ANS: a</p> |
| 5 | <p>Consider a cross in which a trait is inherited by incomplete dominance. What percentage of the F₂ from the mating of homozygous dominant and homozygous recessive individuals will possess the dominant phenotype?</p> <ul style="list-style-type: none">a) 0 per centb) 25 per cent |

| | |
|----|---|
| | <p>c) 50 per cent d) 75 per cent ANS: b</p> |
| 6 | <p>If there is complete linkage in the F2 generation: a) There will be only parental combination b) New combination will be more than the parental combinations c) Parental combinations will be equal to the new combinations d) New combinations would be lesser than the parent one ANS: a</p> |
| 7 | <p>If the DNA codons are CAT CAT CAT, and a Guanine base is added at the beginning, then which would result? a) G CAT CAT CAT b) GCA TCA TCA T c) Frameshift mutation d) Both b and c ANS: d</p> |
| 8 | <p>The most accepted line of descent in human evolution is : a) Ramapithecus→Homo habilis→Homo erectus→Homo sapiens b) Australopithecus→ Homo erectus → Homo habilis →Homo sapiens c) Australopithecus → Ramapithecus → Homo sapiens → Homo erectus d) Neanderthal man→ Ramapithecus →peking man→Homo sapiens ANS: a</p> |
| 9 | <p>Which one of the following antibodies initiates an allergic reaction? a) Ig A b) Ig E c) Ig G d) Ig M ANS: b</p> |
| 10 | <p>A collection of all the alleles of all the genes of a crop plant is called: a) Germplasm collection b) Somoclonal collection c) Protoplast fusion d) Sacred groves</p> |

| | |
|----|---|
| | ANS: a |
| 11 | <p>Trichoderma, a free living fungus can be used for:</p> <ul style="list-style-type: none"> a) Killing insects b) Producing antibiotics c) Biological control of plant disease d) Controlling butterfly caterpillars <p>ANS: c</p> |
| 12 | <p>Which of the following molecules forms lengths of DNA with 'sticky ends'?</p> <ul style="list-style-type: none"> a) DNA ligase b) DNA polymerase c) RNA polymerase d) Restriction enzyme <p>ANS: d</p> |
| 13 | <p>Silencing of a gene could be achieved through the use of:</p> <ul style="list-style-type: none"> a) RNAi only b) Antisense RNA only c) Both RNA and antisense RNA d) None of the above <p>ANS: c</p> |
| 14 | <p>Animal prey defense includes all of the following except:</p> <ul style="list-style-type: none"> a) Camouflage b) Causing harm of flight c) Mimicry d) All of these <p>ANS: d</p> |
| 15 | <p>How much of the net primary productivity of a tereestrial ecosystem is eaten and disgested by herbivores?</p> <ul style="list-style-type: none"> a) 1% b) 10% c) 50% d) 95% <p>ANS: b</p> |
| 16 | <p>Which of the following is not a cause for loss of biodiversity?</p> <ul style="list-style-type: none"> a) Over exploitation of natural resources b) Invasion by alien species c) Keeping animals in zoos |

| | |
|----|--|
| | d) Destruction of habitat ANS:c |
| 17 | Electrostatic precipitator is used to remove: a) Poisonous gases present in the smoke released from the industry b) Carbon dioxide present in the smoke released from the automobiles c) Oxides of Nitrogen present in the smoke released from the automobiles d) Particulate matter present in the smoke released from the industry ANS: d |

OBJECTIVE TYPE QUESTIONS

CLASS XII BIOLOGY

1. The fusion of female reproductive nucleus with the male reproductive nucleus is known as

1. Syngamy
2. Excretion
3. Fertilization
4. Regeneration

2. Which of the following fruit is produced by parthenocarpy?

1. Brinjal
2. Apple
3. Banana
4. Jackfruit

3. The nucleic acid synthesis takes place in

1. 3'-5' direction
2. 5'-3' direction
3. Both ways
4. Any direction

4. *Bacillus thuringiensis* is used for

1. Fermentation of beer
2. Biopesticide
3. Antibiotic
4. None of the above

5. Which is not the characteristic of a population?

1. Natality
2. Mortality
3. Stratification
4. Sex ratio

6. How many phenotypes can occur in the human blood group ABO with alleles $I^A I^B i$?

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

7. The Golden Rice variety is rich in

- a. Vitamin C
- b. B-carotene and ferritin
- c. Biotin

d. Lysine

8. _____ is used as a vector for cloning into higher organisms

- a. Retrovirus
- b. Baculovirus
- c. *Salmonella typhimurium*
- d. *Rhizopusnigricans*

9. Umbilical cord contains _____

- a. Pluripotent stem cells
- b. Cord blood stem cells
- c. Blood stem cells
- d. None of the above

10. Mode of DNA replication is

- a. Conservative and bidirectional
- b. Semiconservative and unidirectional
- c. Semiconservative and bidirectional
- d. Conservative and unidirectional

KENDRIYA VIDYALAYA ERNAKULAM REGION 2019-2020

KENDRIYA VIDYALAYA THRISSUR

CLASS XII

BIOLOGY

MULTIPLE CHOICE QUESTIONS

1.Spermatids are transformed into spermatozoa by

- (a)Spermiation
- (b)Spermatogenesis
- (c)Spermiogenesis
- (d)Sermatocytogenesis

ANS.(C)

2.The test tube baby programme employs which one of the following techniques

- (a)Intra cytoplasmic sperm injection(ICSI)
- (b)Intra uterine insemination(IUI)
- (c)Gamete Intra Fallopian transfer(GIFT)
- (d)Zygote intra fallopian transfer(ZIFT)

ANS.D

3.Downs syndrome is due to

- (a)Linkage
- (b)Sex linked inheritance
- (c)Crossing over
- (d)Non- disjunction of chromosomes

ANS(D)

4.The one aspect which is not a salient feature of genetic code is its being

- (a)Specific
- (b)degenerate
- (C)ambiguous
- (d)universal

ANS.(C)

5.Miller and Urey performed an experiment to p[rove origin of life.They took gases NH₃ and H₂ along with

- (a) N₂ and H₂O
- (b) H₂O and CH₄
- (c) CH₄ and N₂
- (d) CO₂ and NH₃

ANS.(B)

6.The vector of kala-azar is

- (a) *Aedes sp.*
- (b) *Anopheles stephensi*
- (c) *Culex fatigans*
- (d) *Phlebotomus sp.*

ANS.(D)

7.A good producer of citric acid is

- (a) *Pseudomonas*
- (b) *Clostridium*
- (c) *Saccharomyces*
- (d) *Aspergillus*

ANS.(D)

8.Cuscuta is an example of

- (a) ectoparasitism
- (b) Brood parasitism
- (c) Predation
- (d) endoparasitism

ANS.(A)

9.Large woody vines are commonly found in

- (a) Temperate forests
- (b) Mangroves
- (c) Tropical rain forests.
- (d) Alpine forests.

ANS.(C)

10.Biomagnification of DDT in an aquatic food chain starting from water having conc.of 0.003ppb may go in fish eating birds upto

- (a) 2ppm
- (b) 25ppm
- (c) 50ppm
- (d) 100ppm

ANS.(B)

11. In human females, menstruation can be deferred by the administration of

- (a) Combination of FSH AND LSH
- (b) Combination of estrogen and progesterone
- (c) FSH only
- (d) LH only

ANS.(B)

12. The plant in which Hugo de Vries introduced the concept of mutation

- (a) *Oenothera lamarckiana*
- (b) *Pisum sativum*
- (c) *Allium cepa*
- (d) *Mirabilis jalapa*

ANS.(A)

13. How many effective codons are there for the synthesis of twenty amino acids

- (a) 64
- (b) 32
- (c) 60
- (d) 61

ANS.(D)

14. Immunoglobulins serving as mediators in allergic response are

- (a) IgE
- (b) IgD
- (c) IgM
- (d) IgA

ANS.(A)

15. *Monascus purpureus* is a yeast used commercially in the production of

- (a) ethanol

- (b)Streptokinase for removing clots from the blood vessels
- (c)citric acid
- (d)blood cholesterol lowering stains

ANS.(D)

16.Golden rice is a genetically modified plant where the incorporated gene is meant for the biosynthesis of

- (a)Vitamin A
- (b)Vitamin B
- (c)Vitamin C
- (d)Omega 3

ANS.(A)

17.This act as bioindicator of air pollution

- (a)Alga
- (b)Lichen
- (c)Pinus
- (d)Mustard

ANS.(B)

18.Jaya and Ratna developed for green revolution in India are the varieties of

- (a)maize
- (b)rice
- (c)wheat
- (d)bajra

ANS.(B)

19.Which of the following is a free living nitrogen fixing bacterium present in the soil

- (a)Nitrosomonas
- (b)Rhizobium
- (c)Azotobacter
- (d)Pseudomonas

ANS.(C)

10.Vegetative propagation in Pistia occurs by

- (a)Stolon

(b)Offset

(c)RunneR

(d)Sucker

ANS.(B)

MULTIPLE CHOICE QUESTIONS(BIOLOGY)

Class XII

1. The term “homothallic “and monoecious” are used to denote:

- a) Unisexual condition
- b) Bisexual condition
- c) staminate flowers
- d) pistillate flowers

2. Vas deferens receive duct of seminal vesicle and forms :

- a) Epididymis
- b) Urethra
- c) Ejaculatory duct
- d) Urethral meatus

3. Emergency contraceptives are effective if used within :

- a) 72 hours after coitus
- b) 72 hours after ovulation
- c) 72 hours after menstruation
- d) 72 hours after implantation

4. Occasionally a single gene may express more than one effect :This phenomenon is called:

- a) Multiple allelism
- b) Pleiotropy
- c) Polygeny
- d) Dominance

5. In E coli Lac operon gets switched on when:

- a) Lactose is present and binds to the repressor
- b) Repressor binds to the operator
- c) RNA polymerase binds to the operator
- d) Lactose is present and binds to the RNA polymerase

6. In 1953 S L Miller created primitive earth conditions in the laboratory and gave experimental evidence for origin of first form of life from pre existing non living organic molecules.

The primitive earth conditions created include:

- a) Low temperature, volcanic storms and atmosphere rich in oxygen
- b) Low temperature, volcanic storms and reducing atmosphere
- c) High temperature, volcanic storms and non-reducing atmosphere.
- d) High temperature, volcanic storms, reducing atmosphere and contains NH_3 and CH_4

7. Viral disease free plants obtained through :

- a) anther culture
- b) shoot meristem culture
- c) Ovary culture
- d) leaf cell culture

8. The DNA polymerase enzyme used in PCR is obtained from

- (a) *Thermus aquaticus*
- (b) *Escherichia coli*
- (c) *Agrobacterium tumefaciens*
- (d) *Salmonella typhimurium*.

9. Which of the following statements is correct for secondary succession?

- (a) It begins on a bare rock.
- (b) It occurs on a deforested area.
- (c) It follows primary succession.
- (d) It is similar to primary succession, but has a relatively fast pace.

10. Catalytic converters are fitted into automobiles to reduce emission of harmful gases.

Catalytic converters change un burnt hydrocarbons into

- (a) carbon dioxide and water
- (b) carbon mono oxide
- (c) methane
- (d) carbon dioxide and methane.

ANSWERS

| Q. No | | Q No | |
|-------|---|------|---|
| 1 | b | 6 | d |
| 2 | c | 7 | b |
| 3 | a | 8 | a |
| 4 | c | 9 | d |
| 5 | a | 10 | a |

PV PRADEEP
PGT BIOLOGY
KV IDUKKI

BIOLOGY MCQ CLASS XII

1. The process which results the formation of zygote
(a) Isogamy (b) Anisogamy (c) Triple fusion (d) Syngamy
2. Yucca plant is pollinated by
a) Bird, b) Water c) Moth, d) Wind
3. What is the other name of fallopian tube?
a) oviduct b) ampulla c) fimbriae d) all of these
4. The process by which the segregation of Mendelian factors takes place is
a) Hybridisation
b) Mitosis
c) Meiosis
d) Fertilisation
5. The function of Cu T is to prevent
A) Ovulation B) Maturation of ovum C) Fertilization D) Implantation
6. The site of translation is :
a) mitochondria b) ribosome c) nucleus d) endoplasmic reticulum
7. Links between organisms that show branching pattern of evolutionary relationships are shown by _____.
a) living fossils
b) comparative embryology
c) phylogenetic trees
d) two fossil layers
8. . Human immunodeficiency virus (HIV) contains
(a) reverse transcriptase (ii) DNA (iii) double-stranded RNA (iv) nuclear membrane
9. The scientific process by which crop plants are enriched with certain desirable nutrients is called
a) Crop protection b) breeding c) biofortification d) bioremediation

10. Bt" toxin is :

- (a) Intracellular lipid (b) Intracellular crystalline protein (c) Extra cellular crystalline protein (d) Lipid

11. Gel electrophoresis is used for

- a) Construction of recombinant DNA by joining with cloning vectors
b) Isolation of DNA molecules
c) Cutting of DNA into fragments
d) Separation of DNA fragments according to their size

12. . During "gene cloning" which is called as "gene taxi"?

- a. Vaccine
b. Plasmid
c. Bacterium
d. Protozoa

13. Water holding capacity of land depends on ?

- (a) Soil composition (b) Grain size
(c) Aggregation of grain (d) All of these

14. Which of the following is trophic level of the orchid staying on mango tree ?

- (A) First (B) Tertiary/ Third
(C) Second (D) Fourth

15. Which one of the following is an example of ex-situ conservation?

- A National park
B Wildlife sanctuary
C Seed bank
D Sacred groves

16. Global warming can be controlled by

- A Reducing deforestation, cutting down use of fossil fuel
B Reducing reforestation, increasing the use of fossil fuel
C Increasing deforestation, slowing down the growth of human population
D Increasing deforestation, reducing efficiency of energy usage

17. Which one of the following is not used for ex situ plant conservation?

- A Field gene banks

B Seed banks

C Shifting cultivation

D Botanical Gardens

18. The unit by which thickness of Ozone layer is measured.

a) Psi b) A.M.U. c) dB d) D.U.

19. The natural ageing of a lake by nutrient enrichment is called.

a) Biomagnification b) Eutrophication c) Algal bloom d) Desertification

20. According to CPCB, Which size of dust particles in air pollution are harmful to human beings

a) 0.25 micrometers b) 2.5 micrometers c) Less than 2.5 d) Both b and c

Answer key:

1d 2c 3a 4c 5c 6b 7c 8a 9c 10b 11d 12b 13d 14a 15c 16a 17c 18d 19b 20d

KV ADOOR SHIFT I

CLASS- XII

BIOLOGY

SET 1

1. The dihybrid test cross ratio is

- a.1:1:1:1 b.3:1 c.1:1 d.1:2:1

Ans- a.1:1:1:1

2. Name the largest gene in human being

Ans-Dystrophine

3. Identify the following pairs as homologous and analogous organs

- a. Sweet potato and potato b. Eye of octopus and eye of mammal
c. Thorns of bougainvillea and tendrils of cucurbits
d. Forelimbs of bats and whale

Ans- a and b are analogous C and d are homologous

4. Which category of adaptive immunity is provided by vaccination

Ans-Active immunity

5. **Crop** **Variety** **Resistance to the disease**

Wheat ----- Leaf and stripe rust

Ans- Himgiri

6. Name the source of Cyclosporine A. How does this bioactive molecule function in our body

Ans- Trichoderma polysporum. Used as an immune suppressant used in organ transplant patient

7. Expand E F B

Ans-European Federation of Biotechnology

8. State a method of cellular defence which works in all eukaryotic organism

Ans- RNA interference

9. In a pond there were 20 hydrilla plants. Through reproduction 10 new hydrilla plants were added in a year. What will be the birth rate of the plant

$$\text{Ans-Birth rate} = \frac{\text{No of individuals born}}{\text{Total number of individuals}} = \frac{10}{20} = 0.5$$

10. The metals used in catalytic converter are

- a. Iron, Copper
- b. Platinum, Palladium, and Rhodium
- c. Gold, Silver, Nichrome
- d. Mercury, Lead, Iron

Ans- b. Platinum, Palladium, and Rhodium

SET 2

1. Select the correct statement
 - a) Franklin Stahl coined the term linkage
 - b) Formation of RNA from DNA is called translation
 - c) Mendel used *Pisum sativum* for his experiment
 - d) Punnet square was developed by Alec jeffreys
2. Which of the following flowers only once in its lifetime.
 - a) Mango
 - b) Jackfruit
 - c) Bamboo
 - d) Papaya
3. Which of the following has proved helpful in preserving pollen as fossils
 - a)pollen kit
 - b)oil content
 - c)sporopollenin
 - d)cellulosic intine
4. Selet the plant pollinated by water
 - a).Water hyacinth
 - b)Lotus
 - c)Vallisnaria
 - d)Amorphophallus
5. The breakdown of detritus into small particles by detritivores is called
 - a) Leaching
 - b) Fragmentation
 - c) Mineralisation

- d) Catabolism
6. An orchid growing as an epiphyte on a mango tree is an example for
- Parasitism
 - Predation
 - Commensalism
 - Competition
7. The pioneer species in Xerarch and Hydrarch succession are respectively
- Lichens and rooted hydrophytes
 - Lichens and Phytoplanktons
 - Phytoplanktons and Lichens
 - Lichens and Sedges
8. The first r- DNA was constructed by linking antibiotic resistant gene with the native plasmid of
- Escherihia coli
 - Salmonella typhimurium
 - Acetobacter aceti
 - Bacillus thuringiensis
9. Viruses of genus Nucleopolyhedrovirus are employed as
- Gobar gas producers
 - Biological control agents
 - Atmospheric nitrogen fixers
 - Antibiotics,
10. A person affected with phenyl ketonuria, lack an enzyme that converts the amino acid Phenyl alanine into
- Valine
 - Proline
 - Tyrosine
 - Methionine

ANSWERS

1.C

2.c

3.c

4.c

5.b

6.c

7.b

8.b

9.b

10.c

CLASS XII BIOLOGY

MULTIPLE CHOICE QUESTIONS

- Pick the hormone which is not secreted by human placenta.
a. HCG b. estrogen c. progesterone d. FSH
- Which one of the following infections in tobacco plants can be protected by RNA Interference (RNAi)?
a. insects b. pests c. nematodes d. Bacteria
- Which one of the following is not in-situ method of conservation of flora?
a. Biosphere Reserve b. Botanical Garden c. National Park d. Wildlife Sanctuary
- Lake Victoria in Africa has seen a large loss in biodiversity in the last 20 years, particularly in the numbers and kinds of cichlid fish due to
a. Increased pesticide use has poisoned the fish and they can no longer reproduce.
b. Algal blooms are choking out the fish.
c. The Nile perch was introduced into the lake and it has changed the ecological balance.
d. Reduced biodiversity has eliminated the cichlid's primary prey.
- Statement I: Developing and underdeveloped world are rich in biodiversity and traditional knowledge related to bio-resources.
Statement II: Industrialized nations are rich financially but poor in biodiversity and traditional knowledge about bio-resources.
Statement III: Traditional knowledge can be exploited to develop modern applications.
(a) All statements are wrong (b) Statement I and II is correct only
(c) All statements are correct (d) Statement II and III is correct only
- If DNA is digested by EcoRI, it will lead to
a. Blunt ends
b. Multiple ori
c. Sticky ends
d. No antibiotic resistance
- Detritus includes
a. Dead plant parts b. Remains of animals c. Animal excretions d. All of these
- Which of the following causes bio magnification?
a. SO₂ b. Mercury c. DDT d. Both b & c
- Assertion: The earliest organisms that appeared on the earth were non-green and presumably anaerobes.
Reason: The first autotrophic organisms were the chemo-autotrophs that never released oxygen.

- a. Both Assertion and Reason are true and the Reason is the correct explanation of the Assertion
 - b. Assertion is true statement but Reason is false
 - c. Both Assertion and Reason are false statements
 - d. Both Assertion and Reason are true and the Reason is not the correct explanation of the Assertion
10. During organs transplantation, the organs cannot be taken from just anybody since the graft would be rejected sooner or later due to
- a. Innate immunity
 - b. Cell mediated immune response
 - c. Passive immunity
 - d. Blood group

CLASS XII BIOLOGY

MULTIPLE CHOICE QUESTIONS

- Pick the hormone which is not secreted by human placenta.
a. HCG b. estrogen c. progesterone d. FSH
- Which one of the following infections in tobacco plants can be protected by RNA Interference (RNAi)?
a. insects b. pests c. nematodes d. Bacteria
- Which one of the following is not in-situ method of conservation of flora?
a. Biosphere Reserve b. Botanical Garden c. National Park d. Wildlife Sanctuary
- Lake Victoria in Africa has seen a large loss in biodiversity in the last 20 years, particularly in the numbers and kinds of cichlid fish due to
a. Increased pesticide use has poisoned the fish and they can no longer reproduce.
b. Algal blooms are choking out the fish.
c. The Nile perch was introduced into the lake and it has changed the ecological balance.
d. Reduced biodiversity has eliminated the cichlid's primary prey.
- Statement I: Developing and underdeveloped world are rich in biodiversity and traditional knowledge related to bio-resources.
Statement II: Industrialized nations are rich financially but poor in biodiversity and traditional knowledge about bio-resources.
Statement III: Traditional knowledge can be exploited to develop modern applications.
(a) All statements are wrong (b) Statement I and II is correct only
(c) All statements are correct (d) Statement II and III is correct only
- If DNA is digested by EcoRI, it will lead to
a. Blunt ends
b. Multiple ori
c. Sticky ends
d. No antibiotic resistance
- Detritus includes
a. Dead plant parts b. Remains of animals c. Animal excretions d. All of these
- Which of the following causes bio magnification?
a. SO₂ b. Mercury c. DDT d. Both b & c
- Assertion: The earliest organisms that appeared on the earth were non-green and presumably anaerobes.
Reason: The first autotrophic organisms were the chemo-autotrophs that never released oxygen.

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10. During organs transplantation, the organs cannot be taken from just anybody since the graft would be rejected sooner or later due to
- a. Innate immunity
 - b. Cell mediated immune response
 - c. Passive immunity
 - d. Blood group

KENDRIYA VIDYALAYA ADOOR SHIFT 2
CLASS XII-BIOLOGY MCQ
SET1

- 1) How many microspore mother cells are required for the formation of 100 seeds.
(a) 25 (b) 50 (c)100 (d) None of these

- 2) Which one among the following is odd.
(a) Synergids (b) Egg (c)Generative cell (d) Chalaza

- 3) Which of the following hormones is not secreted by human placenta?
(a) hCG (b) Estrogen (c)LH (d)Hpl

- 4) In the F₂ generation of a Mendelian dihybrid cross the number of phenotypes and genotypes are:
(a) Phenotypes-4,genotypes-16
(b)) Phenotypes-9,genotypes-4
(c)) Phenotypes-4,genotypes-8
(d)) Phenotypes-4,genotypes-9

- 5) Darwin's finches are an excellent example of
(a)brood parasitism (b) adaptive radiation c) connecting links D) seasonal migration.

- 6) Q6. If the total amount of guanine and cytosine in an isolated DNA segment is 60 % of the total , what will be the % of adenine in this DNA segment.
A) 10% b) 20 % c) 30% d) 40 %

- 7) Select the pair of hereditary disorders that are sex linked
a)thalassemia and phenylketonuria
b phenylketonuria and sicklecell anaemia
c) sicklecell anaemia and colour blindness
d) colour blindness and haemophilia

- 8) Which among the following is a primary lymphoid organ
a) lymph nodes
b) bone marrow
c) peyer's patches
d) spleen

9) The process of development of ovary into fruit without fertilization is

- c) parthenogenesis
- d) parthenocarpy
- c) apomixis
- d) Apospory

10) The objective of Ramsar convention is conservation of

- a) forest
- b) wet lands
- c) wildlife
- d) tigers

answers 1. a 2.d 3.c 4.d 5.b 6b 7.d 8.b 9.b 10.c

MCQ CLASS 12 BIOLOGY

SET 2

Q1.Seminal plasma, the fluid part of semen, is contributed by:

- i) Seminal vesicle*
- ii) Prostate gland*
- iii) Urethra*
- iv) Bulbourethral gland.*

a. I and ii b. I,ii and iv c. ii,lii and iv d. I and iv.

Q2.T- lymphocytes are associated with:

- a. Humoral immunity*
- b. Inflammatory response*
- c. Cell mediated immunity*
- d. Phagocytosis.*

Q3. The sporozoites that cause infection when a female Anopheles mosquito bites a person, are formed in

- a. Liver of the person*
- b. RBCs of mosquito*
- c. Salivary glands of mosquito*
- d. Gut of mosquito.*

Q4. Which of the following is not required in the preparation of a recombinant DNA molecules?

- a. Restriction endonuclease
- b. Restriction mapping
- c. Centrifugation
- d. PCR.

Q5. silencing of a gene could be achieved through the use of

- a. RNAi only
- b. antisense RNA only
- c. both RNAi and antisense RNA
- d. none of the above.

Q6. During the process of ecological succession the changes that take place in communities are

- a. Orderly and sequential
- b. Random
- c. Very quick
- d. Not influenced by the physical environment.

Q7. The membranous cover of the ovum at ovulation is:

- (a) Corona radiata (b) Zona radiata
- (c) Zona Pellucida (d) Chorion

Q8. A procedure that finds use in testing for genetic disorders, but is also misused for female foeticide is:

- (a) Lactational amenorrhea (b) Amniocentesis (c) Artificial insemination (d) Parturition

Q9. Reason for Rheumatoid arthritis:

- (i) Lymphocytes become more active (ii) Body attacks self cells
- (iii) More antibodies produce in the body (iv) The ability to differentiate pathogens or foreign molecules from self cells is lost

Q10. 50,000 different strains of rice in India is type of:

- (a) Ecological diversity (b) Species diversity
- (c) Genetic diversity (d) All are correct

Answers:

1. *(b) i , ii and iv*
2. *(c) cell- mediated immunity*
3. *(c) salivary glands of mosquito*
4. *(b) restriction mapping*
5. *(c) both RNAi and antisense RNA*
6. *(a) orderly and sequential*
7. *(a) corona radiata*
8. *(b) amniocentesis*
9. *(b) body attack selfcells*
10. *(c) genetic diversity*

MCQ

BIOLOGY CLASS XII

| Q.No | QUESTIONS | Answers |
|------|--|---|
| 1. | Perisperm is (a) Ovule wall (b) Ovule coat (c) Persistent nucellus in seed (d) Cotyledon of seed | (c)Persistent nucellus in seed |
| 2. | The cavity present in the graffian follicle is (a) amniotic cavity (b)antrum (c)ostium (d)blastocoel | (b)antrum |
| 3. | Sex chromosome of a female bird are represented by (a) XO (b)ZW (c)XY (d)ZZ | (b)ZW |
| 4. | In split genes the coding sequences are called (a)introns (b)operons (c)exons (d)cistrans | (c)exons |
| 5. | Widal test is used for the diagnosis of (a)malaria (b)typhoid (c)pneumonia (d)AIDS | (b)typhoid |
| 6. | An explant is (a)dead plant (b)part of a plant (c)part of the plant used in tissue culture (d)part of the plant that express a specific gene | (c)part of the plant used in tissue culture |
| 7. | A common biocontrol agent for the control of plant disease is (a)Trichoderma (b)frankia (c)Bacillus thuringiensis (d)glomus | (a)Trichoderma |
| 8. | In a food chain herbivores are (a)primary producers (b)primary consumers (c)secondary consumer (d)decomposers | (b)primary consumers |
| 9. | The carrying capacity of a population is determined by its (a)Birth rate (b)death rate | (c)reproductive status |

| | | |
|-----|---|----------------------------------|
| | (c)reproductive status (d)limiting resources | |
| 10. | Endemic plants are those which are (a)cosmopolitan in distribution (b)restricted to certain area (c)found in arctic region (d)aquatic | (b)restricted to certain area |

MCQ-(XII -BIOLOGY)

1. . *Bacillus thuringiensis* is used to control
 - (a) fungal pathogens
 - (b) nematodes
 - (c) bacterial pathogens
 - (d) insect pests.
2. . *Propionibacterium* produces large holes in swiss cheese due to the
 - (a) process of oxidation of the dough
 - (b) formation of large amount of CO₂

- (c) consumption of carbohydrates
 - (d) all of these
3. Biolistics (gene gun) is suitable for
 - (a) introducing rDNA into plant cells
 - (b) introducing rDNA into animal cells
 - (c) disarming the pathogen vectors
 - (d) DNA fingerprinting.
 4. The DNA fragments produced by the use of restriction endonucleases can be separated by
 - (a) polymerase chain reaction
 - (b) gel electrophoresis
 - (c) density gradient centrifugation
 - (d) any of the above.
 5. 4. Plasmids in bacterial cells are
 - (a) extra-chromosomal DNA, which cannot replicate
 - (b) extra-chromosomal DNA, which can self-replicate
 - (c) extra DNA associated with the genome
 - (d) extra DNA, associated with the genome, but cannot replicate.
 6. 1. The genes cryIAb and cryIIAb produce toxins against _____ and _____, respectively.
 - (a) cotton bollworms, com borer
 - (b) nematode, cotton bollworm
 - (c) com borer, cotton bollworm
 - (d) com borer, nematodes
 7. 2. Which among the following is based on antigen-antibody interaction?
 - (a) PCR
 - (b) Electrophoresis
 - (c) ELISA
 - (d) All of these.
 8. The T_i plasmid used for producing transgenic plants is found in
 - (a) Azotobacter
 - (b) Rhizobium
 - (c) Azospirillum
 - (d) Agrobacterium
 9. Niche is defined as
 - (a) a component of an ecosystem
 - (b) an ecologically adapted zone of a species
 - (c) the physical position and functional role of a species within the community
 - (d) all plants and animals living at the bottom of a water body.
 10. The formula of exponential population growth curve, is
 - (a) $dN/dt = rN$
 - (b) $dt/dN = rN$
 - (c) $dN/rN = dt$
 - (d) $rN/dN = dt$

1. (d)
- 2.. (b)
3. (a)

4. (b)
5. (b)
6. (c)
7. (c)
8. (d)
9. (c)
10. (d)

KENDRIYA VIDYALAYA KALPETTA

MULTIPLE CHOICE QUESTIONS

CLASS XII - BIOLOGY

1. Which of the following is used as an atmospheric pollution indicator?
(a) Lepidoptera (b) Lichens (c) Lycopersicon (d) Lycopodium
2. The clinical test that is used for diagnosis of typhoid is
(a) ELISA (b) ESR (c) PCR (d) WIDAL
3. The substance produced by a cell in viral infection that can protect other cells from further infection is
(a) serotonin (b) colostrum (c) interferon (d) histamine
4. Posture and balance of the body is controlled by
(a) Cerebrum (b) Cerebellum (c) Medulla (d) Pons
5. In a neuron, conversion of electrical signal to a chemical signal occurs at/in
(a) Cell body (b) axonal end (c) dendritic end (d) axon

| MCQ CLASS 12 BIOLOGY | | |
|----------------------|--|--|
| 1 | Heterothalms represent..... a. asexual condition b. unisexual condition c. bisexual condition d. none of these | |
| | Ans. b | |
| 2 | Identify the pair that represents the pre fertilization events. a. Gametogenesis and syngamy b. Pollination and embryogenesis b. c. Pollination and syngamy d. gametogenesis and pollination | |
| | Ans. d | |
| 3 | Primary treatment of effluent is..... a. Physical process b. chemical process c. biological process d. physico chemical process | |
| | Ans.a | |
| 4 | How many sperms will be formed from 100 secondary spermatocytes? a.100 b. 200 c. 400 d. 300 | |
| | Ans. b | |
| 5 | Which of the following exhibits Biomagnification? a. SO ₂ b. mercury c. DDT d. both b and c | |
| | Ans. d | |
| 6 | Interferons are produced by virus infected cells to protect healthy plants from virus infection. Identify the type of barrier it represents. a. cytokine b. physical c. cellular d. physiological | |
| | Ans. a | |
| 7 | Which of the following is not a part of dicot embryo? a. Plumule b. Hypocotyle c. Coleoptile d. Radicle | |
| | Ans. c | |
| 8 | Homologous organs show..... a. natural selection b. divergent evolution c. parallel evolution d. convergent evolution | |
| | Ans. b | |
| 9 | In some viruses DNA is synthesized by using RNA as a template. Such a DNA is called..... a. r-DNA b. C-DNA c. B- DNA d. A- DNA | |
| | Ans. b | |
| 10 | Number of chromosomes in polar body of human is..... a. 23 b. 46 c. 21 d. 1 | |
| | Ans. a | |

MULTIPLE CHOICE QUESTIONS
CLASS XII
SUBJECT BIOLOGY Prepared By- Mr.M
JAYASEELAN)

1. How many microspore mother cells are required to produce 1000 pollen grains?
a) 100 b) 1000 c) 200 d) 250
2. The development of fruit without fertilisation of ovary is called
a) parthenogenesis b) parthenocarpy c) apomixis d) agamspermy.
- 3) There is no cell division involved in
a) spermatogenesis b) oogenesis c) embryogenesis d) spermiogenesis.
- 4) The outermost layer of blastocyst is called
a) ectoderm b) endoderm c) trophoblast d) mesoderm
- 5) In which of the following ARTs in vivo fertilisation occur
a) ZIFT b) GIFT c) ICSI d) IVF
- 6). Eucaryotic RNA polymerase catalyses the synthesis of
a) mRNA b) rRNA c) hnRNA d) tRNA.
- 7). Operon mode of regulation of transcription was proposed by
a) Meselson and Stahl b) Jacob and Monod c) Watson and Crick d) Hershey and Chase
- 8). Appearance of antibiotic resistant bacteria is an example of
a) adaptive radiation b) transduction c) pre-existing variation in population d) convergent evolution
- 9). Nitrogen fixation in Anus is brought about by
a) Frankia b) Azospirillum c) Nostoc d) Rhizobium
- 10). Bacillus thuringiensis is used to control
a) Nematode b) insect pest c) bacteria d) fungus

PART-II

Prepared By- Mrs. V R RADHAMANI

Human Reproduction

1) The membranous cover of the ovum at ovulation is

- | | |
|--------------------------|------------------------|
| a) corona radiata | b) zona radiata |
| c) zona pellucida | d) chorion |

2) Person having genotypes $I^A I^B$ would show the blood group as AB.

This is because of -

- a) pleiotropy
- b) co-dominance
- c) segregation
- d) incomplete dominance

3) According to Hugo de Vries, Speciation is due to -

- a) accumulation of small variations
- b) intra specific breeding
- c) interspecific breeding
- d) saltation

4) Haemozoin is a

- a) precursor of haemoglobin
- b) toxin released from streptococcus infected cell
- c) toxin released from plasmodium infected cell
- d) toxin released from haemophilus infected cell

5) A collection of all the alleles of all the genes of a crop plant is called -

- a) germplasm collection
- b) protoplasm collection
- c) herbarium
- d) somaclonal collection

6) In agarose gel electrophoresis, DNA molecules are separated on the basis of their-

- a) charge only
- b) size only
- c) charge to size ratio
- d) all of the above

7) Silencing of a gene could be achieved through use of

- a) RNAi only
- b) antisense RNA only
- c) both RNAi and antisense RNA
- d) none of the above

8) A population has more young individuals. What would be the status of the population

After some years ?

- a)it will decline b)it will stabilize
c)it will increase d)it will first decline and then stabilize

9) Which one of the following is not a major characteristic feature of biodiversity hot spots?

- a)large number of species b)abundance of endemic species
c)mostly located in the tropics d)mostly located in the polar regions

10)The major source of noise pollution worldwide is due to -

- a)office equipment b)transport system
c)sugar, textile and paper industries d)oil refineries and thermal powerplants

ANSWERS

1. (a) 2. (b) 3. (d) 4. (c) 5. (a)

6. (d) 7. (c) 8. (c) 9. (c) 10. (b)

Prepared By- (Mrs. Mridula Gokuldas)

1. *Strobilanthus kunthiana* is a perennial plant that

- a) Blooms throughout the year b) Blooms seasonally
c) Flowers once in 12 years d) once in life Time

2. The layer of the microsporangium which nourishes the developing spores.

A) Epidermis

b) Tapetum

c) Endothecium

d) Middle layer

3. Graafian follicle transforms into corpus luteum

a) In the absence of fertilisation b) to secrete estrogen

c) To secrete progesterone d) for disintegration of endometrium

4. Crossing a Dominant character with (Homozygous & Heterozygous) with a recessive trait to know the genotype is called;-

a) Back cross b) Monohybrid Cross

c) Test Cross d) Dihybrid Cross

5. Some amino acids are coded by more than one codon hence the codon is said to be

a) Universal

b) Degenerate

c) Unambiguous

d) Specific

6. The Theory of Panspermia is still a favourite idea for some astronomers which states that

a) Life could have come from pre-existing Life

b) Life started from chemicals

c) Units of life called spores were transferred to different planets

d) Life came out of decaying & rotting matter

7. The type of immunity that is involved to protect the uninfected cells by virus by interferons for further infection is

a) Physical barrier

b) Physiological barrier

c) Cellular barrier

d) Cytokine barrier

1. Biofortification is a method of breeding crops for

a) Increasing the amount of production

b) To produce disease resistant variety

c) To improve the nutritional quality

d) To produce high amount of vitamin

**1. This palindromic sequence GAATTC is recognised by the RE
CTTAAG**

- a) BamH I**
- b) Sal I**
- c) EcoRI**
- d) Hind III**

**1. Bird population is seen to decrease due to thinning of egg shells which is caused
by :**

- a) Eutrophication**
- b) Biomagnification**
- c) Greenhouse Effect**
- d) Ozone depletion**

ANSWERS

1. (c) 2. (b) 3. (c) 4. (c) 5. (b)

6. (c) 7. (d) 8. (c) 9. (c) 10. (b)

1. How many meiotic divisions are required to produce 200 microspores from functional microspore mother cell ?
 - a) 400
 - b) 50
 - c) 200
 - d) 100
2. A human cell containing 22 autosomes and a Y chromosome is probably a
 - a) somatic cell of male
 - b) sperm cell
 - c) somatic cell of female
 - d) unfertilized egg cell
3. How many genotypes are possible in human ABO blood grouping
 - a) 2
 - b) 4
 - c) 6
 - d) 8
4. A haemophilic man marries a normal homozygous woman. What is the probability that their son will be haemophilic
 - a) 100%
 - b) 75 %
 - c) 50%
 - d) 0%
5. Lac operon transcribed when
 - a) lactose is needed by the cell
 - b) lactose is available to the cell
 - c) lactic acid is needed by the cell
 - d) lactic acid is available to the cell
6. An antiviral protein released from infected and dying cell
 - a) antigen
 - b) antibody
 - c) antiserum
 - d) interferon
7. In a recombinant DNA technology a plasmid vector must be cleaved by
 - a) the same enzyme that leaves the donor gene
 - b) modified DNA ligase
 - c) a heated alkaline solution
 - d) four separate enzymes
8. If pollutants are added continuously in a water body they will cause
 - a) increase in BOD
 - b) decrease in BOD
 - c) death of all plants
 - d) increase in oxygen concentration
9. Montreal protocol aims at

- a) biodiversity conservation b) reduction of ozone depleting substances
c) control of water pollution d) control of carbondioxide emission

10. Which of the following symbols represent a Turner's syndrome

- a) AAXO b) AAXY
c) AAXXY d) AAXYY

ANSWERS

- 1) b 2) b 3) c 4) d 5) b
6) d 7) a 8) a 9) b 10) a

K J JOHN PGT BIOLOGY

MCQ BIOLOGY FOR CLASS XII

1. Meicyte of paddy plant has 24 chromosomes. The number of chromosomes in the endosperm, nucellus and synergid are respectively ----- .

(a) 24, 12, 36 b) 24, 24, 12 c) 36, 12, 24 d) 36, 24, 12)

2. Which of the following organism shows zygotic meiosis?

(a) Nephrolepis, b) Pinus, c) Spirogyra d) mango)

3. Which of the following statement is true in respect of zoospore?

(a) Motile diploid spore b) Nonmotile haploid spore c) Motile haploid spore d) Nonmotile diploid spore)

4. A mature embryosac in angiosperm is formed from a megaspore mother cell by ----- cell divisions.

(a) one mitosis and two meiosis, b) two mitosis and one meiosis, c) three mitosis and two meiosis
d) three mitosis and one meiosis)

5. Scutellum, coleoptile, coleorhiza and epiblast are part of ----- .

(a) Dicot embryo, b) Grass embryo, c) Castor seed, d) bean seed)

6. Find the odd one out.

(a) spermatid, b) sertoli cell, c) polar body, d) Leydig cell)

7. How many sperms are produced from 50 secondary spermatocytes in human beings?

(a) 100, b) 200, c) 100, d) 25)

8. The reason for increased amount of progesterone during the secretory phase of menstrual cycle is ----
---- . (a) Maturation of secondary follicle, b) Increased secretion of FSH, c) Regression of corpus luteum,

d) Formation of corpus luteum from Graafian follicle)

9. Acrosome is important for ----- .

a) ATP production, b) Dissolving membrane of ovum, c) Motility of sperm, d) Nutrition of sperm)

10. Infertility due to very low count of sperm in ejaculates can be corrected by ----- .

(a) ZIFT, b) IUT, c) GIFT, d) IUI)

Answers: 1)d, 2)c, 3)c, 4)d, 5)b, 6)c, 7)a, 8)d, 9)b, 10)d

BIOLOGY CLASS-XII

MULTIPLE CHOICE QUESTIONS

1. Name the ancestor of Bryophyte (Choose correct option from following):
 - a) Chlorophyta
 - b) Pteridophytes
 - c) Angiosperms
 - d) Gymnosperms

- 2) Identify the correct statement related to genetic disorders:
 - a) Phenylketonuria is an inborn error of metabolism & is a genetic disorder
 - b) Haemophilia is an inborn error of metabolism & is a genetic disorder
 - c) Phenylketonuria is caused due to a simple cut in DNA that results in non-stop bleeding
 - d) Phenylketonuria and Haemophilia are not genetic disorders.

- 3) Which of the following statements is not an example of evolution due to anthropogenic action?
 - a) Evolution of DDT resistant mosquitoes
 - b) Evolution of antibiotic resistant bacteria
 - c) Evolution of Dinosaurs
 - d) Evolution of dark winged or white winged moth.

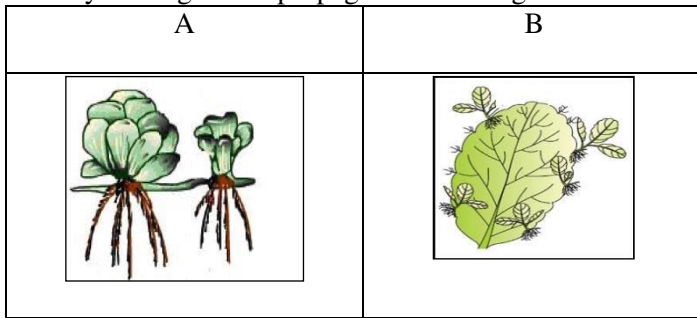
- 4) Which statement of the following is **INCORRECT** regarding **spleen** in the human body?
 - a) It is a secondary lymphoid organ
 - b) It filter microbes from blood
 - c) It is blood bank of the body
 - d) It produces growth hormone

- 5) HIV differs from a bacteriophage in the following aspects.
 - a) HIV has DNA as the genetic material whereas Bacteriophage has RNA.
 - b) HIV has protein coat whereas bacteriophage is without protein coat.
 - c) HIV has RNA as the genetic material whereas Bacteriophage has DNA.
 - d) HIV insert protein coat into host cell whereas bacteriophage insert its genetic material.

- 6) Prenatal diagnostic procedures are highly useful. Identify the genetic problem which cannot be diagnosed by amniocentesis.
 - a) Down syndrome
 - b) Haemophilia
 - c) Klinefelter's syndrome
 - d) Turner's syndrome.

- 7) A biotechnologist wants to inactivate tetracycline resistant gene in pBR322 by inserting a foreign gene. Identify the suitable restriction enzyme for the purpose.
 - a) EcoR1
 - b) Pst1
 - c) Pvu1
 - d) Sal1

8) Identify the vegetative propagules in the Fig A and B.



- a) Rhizome and offset
 - b) Offset and bulbil
 - c) Leaf bud and Offset
 - d) Sucker and leaf bud
- 9) The theory of Panspermia states that.
- a) Life originated from chemicals.
 - b) Life originated spontaneously.
 - c) Life came from mud and decaying substances.
 - d) Life came from outer space.
- 10) Suggest a suitable ART for the given medical condition-
'A woman with functional ovary and uterus but a defective fallopian tube'.
- a) GIFT
 - b) ICSI
 - c) IVF
 - d) Insemination.

KENDRIYA VIDYALAYA KANNUR

MULTIPLE CHOICE QUESTIONS

CLASS: XII

SUBJECT: BIOLOGY

1. Both B & T lymphocytes are produced in the bone marrow; however, only the T lymphocytes travel to the _____ and mature there.
- Spleen
 - Thymus
 - Pituitary gland
 - Adrenal gland

Ans:b

2. Perisperm and endosperm differ in
- Being a diploid tissue
 - Being a haploid tissue
 - Having no reserve food
 - Formation of perisperm by fusion of the secondary nucleus with many sperms

Ans:d

3. In IVF technique zygote or early embryo is transferred into
- Cervical canal
 - Uterus
 - Fallopian tube
 - Vagina

Ans:c

4. _____ is used as a vector for cloning into higher organisms
- Retrovirus
 - Baculovirus
 - Salmonella typhimurium*
 - Rhizopusnigricans*

Ans:a

5. Klinefelters syndrome has the genetic make up

(a) 44 autosomes + xxy (b) 44 autosomes + xo (c) 45 autosomes + xx

(d) 45 autosomes + xy

Ans:a

6. Which of the following DNA sequences would a Restriction enzyme recognize and cut?

a. ATGCAC

TACGTG

b. GATATC

CTATAG

c. TAGATA

ATCTAT

d. AATATA

TTATAT

Ans:b

7. The conditions of the earth atmosphere conducive for the origin of life were:

- (a) Presence of high temperature, CH₄, NH₃, and O₃
- (b) High temperature, CH₄, NH₃, volcanic eruption
- (c) High temperature, volcanic eruption, O₂, NH₃
- (d) Volcanic eruption, CH₃, NH₃ and O₂

Ans:b

8. Non coding sequences present within a gene is called:

- (a) Exon
- (b) Operon
- (c) Promoter
- (d) Intron

Ans:d

9. To analyse the genotype of an organism, it is made to

- (a) Self cross
- (b) Cross with recessive parent
- (c) Cross with dominant parent
- (d) Cross with another species

Ans:b

10. "Cleistogamous flowers are invariably autogamous because"

- (a) These flowers do not open at all.
- (b) There is no chance of cross – pollen landing on the stigma.
- (c) These flowers have exposed anthers and stigma.
- (d) These flowers are wind pollinated.

Ans:a

11. The ploidy of the zygote in angiosperms after double fertilization is

- (a) 4n
- (b) n
- (c) 2n
- (d) 8n.

Ans c

12. ----- is the composition of the intine of the pollen grain

- (a) cellulose and kitin
- (b) kitin and polysaccharide
- (c) cellulose and pectin
- (d) polysaccharide and glycoprotein

Ans. C

13. The sequence of accessory ducts from the testis to the body cavity in Man is-----

- (a) Rete testis, vasa efferentia, epididymis and vas deferens
- (b) Vasa efferentia, rete testis, vas deferens and epididymis
- (c) Vasa efferentia, vas deferens, epididymis and rete testis
- (d) Epididymis, vasa efferentia, rete testis and vas deferens

Ans. A

14. The immunoglobulin present in colostrum is

- (a) IgE
- (b) IgM
- (c) IgG
- (d) IgA

Ans. D

15. Identify the codon which is present in the sixth position of m-RNA of normal Haemoglobin gene

- A) GAG
- (b) GAA
- (c) GCC
- (d) GTG

Ans. A

16. Transforming Principle experiment was conducted by

- (a) Oswald Avery
- (b) Frederick Griffith
- (c) Thomas Hunt Morgan
- (d) Francois Jacob

Ans. B

17. The brain capacity of Neanderthal man is---

- (a) 1400 cc
- (b) 900 cc
- (c) 650-800 cc
- (d) 400-500 cc

Ans.A

18. The plant which shows hallucinogenic property is

- (a) Ocimum sanctum (b) Atropa belladonna
© Papaversomniferum (d) Cannabis sativa

Ans. B

19. Atlas 66 is a -----.

- (a) Protein enriched maize (b) Vit.C enriched bitter gourd
© Protein enriched wheat (d) Protein enriched rice.

Ans C.

20. The interaction between Fig tree and wasp is called

- (a) Commensalism (b) Ammensalism
© Mutualism (d) Parasitism

Ans. C

KENDRIYA VIDYALAYA INS DRONACHARYA

MCQ CLASS XII BIOLOGY

1. Asexual microscopic motile reproductive structures are called ...

- a) Microspores b) Zoospores c) Conidiospores d) Aplanospores

Correct answer: (d)

2. Assured seed set is by ...

- a) Geitonogamous flowers b) Chasmogamous flowers c) Cleistogamous flowers

- d) Xenogamous flowers

Correct answer: (C)

3. 'Finger-like-projections' at the edges of the 'infundibulum' are called ...

- a) Vesicles b) Ampullae c) Filiform apparatus d) Fimbriae

Correct answer: (d)

4. 'Non-medicated IUDs' ...

- b) Lippes loop b) Multiload 375 c) LNG 20 d) Progestasert

Correct answer: (a)

5. The mechanism of 'sex determination' in birds is ...

- c) XX -XY b) ZZ -ZW c) ZZ -WW d) XX -XO

Correct answer: (b)

6. DNA is a better genetic material than RNA because ...

- a) DNA is chemically less reactive.
b) DNA is structurally more stable.
c) DNA is non-catalytic and less easily degradable.
d) All of the above.

Correct answer: (d)

7. A 'single step-large mutation' is known as ...

- a) Branching descent b) Natural Selection c) Saltation d) Gene Migration

Correct answer: (c)

8. The disease spread through contaminated food and water are ...

- a) Pneumonia and Typhoid b) Typhoid and Malaria c) Malaria and Amoebiasis d) Amoebiasis and Typhoid

Correct answer: (d)

9. The disease resistant variety of ***Brassica*** resistant to “white rust” is ...

- a) Pusa Swarnim b) Pusa Komal c) Pusa Sadabahar d) Pusa Shubhra

Correct answer: (a)

10. The bioactive molecule “Statin” is produced by ...

- a) *Trichoderma* b) *Streptococcus* c) *Monascus purpureus* d) Baculovirus

Correct answer: (c)

11. The BamH I restriction site of the cloning vector **pBR322** is situated on ...

- a) rop gene b) ampicillin resistant gene c) ori gene d) tetracycline resistant gene

Correct answer: (d)

12. The first transgenic cow ‘Rosie’ produced human protein at the rate of ...

- a) 24g/l b) 0.24g/l c) 2.4g/l d) 240g/l

Correct answer: (c)

13. Dia-pause is a stage of ...

- a) Suspended reproduction b) suspended growth c) suspended flowering d) suspended development

Correct answer: (d)

14. Decomposition rate is slower if detritus is ...

- a) Rich in Nitrogen b) Rich in lignin and chitin c) Rich in sugars d) Rich in fats and lipids

Correct answer: (b)

15. The variation shown by the medicinal plant ***Rauwolfia vomitoria*** is ...

- a) Species diversity b) Ecological diversity c) Varietal diversity d) Genetic diversity

Correct answer: (d)

16. The propounder of **organic farming** is ...

- a) Ahmed Khan b) Ramesh Chandra Dugar c) FOAM d) Frederick Griffith

Correct answer: (b)

17. Euro –II norm stipulate ‘sulphur’ level in diesel and petrol to be ...

- a) 400 ppm in diesel and 150 ppm in petrol.
b) 350 ppm in diesel and 180 ppm in petrol.
c) 100 ppm in diesel and 50 ppm in petrol.
d) 350 ppm in diesel and 150 ppm in petrol.

Correct answer: (d)

18. "Increased diversity contributed to higher productivity" –was experimentally proved by ...

- a) David Tilman b) Paul Ehrlich c) Alexander Von Humbolt d) Robert May

Correct answer: (a)

19. India is one of the twelve "Mega diversity countries" in the world due to ...

- a) Having 2.5% of the land area and 8.2% global species diversity.
b) Having 2.4% of the land area and 8.1% global species diversity.
c) Having 2.6% of the land area and 8.3% global species diversity.
d) Having 2.4% of the land area and 8.2% global species diversity.

Correct answer: (b)

20. The species that invade a bare area is called ...

- a) First species b) Pioneer species c) Starting species d) Introductory species

Correct answer: (b)

MCQ CLASS XII BIOLOGY

21. Asexual microscopic motile reproductive structures are called ...

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22. Assured seed set is by ...

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d) Xenogamous flowers

Correct answer: (C)

23. 'Finger-like-projections' at the edges of the 'infundibulum' are called ...

- d) Vesicles b) Ampullae c) Filiform apparatus d) Fimbriae

Correct answer: (d)

24. 'Non-medicated IUDs' ...

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Correct answer: (a)

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Correct answer: (b)

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f) DNA is structurally more stable.
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h) All of the above.

Correct answer: (d)

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Correct answer: (c)

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and Typhoid

Correct answer: (d)

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Correct answer: (a)

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h) 350 ppm in diesel and 150 ppm in petrol.

Correct answer: (d)

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Correct answer: (a)

39. India is one of the twelve “Mega diversity countries” in the world due to ...

- e) Having 2.5% of the land area and 8.2% global species diversity.
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- g) Having 2.6% of the land area and 8.3% global species diversity.
- h) Having 2.4% of the land area and 8.2% global species diversity.

Correct answer: (b)

40. The species that invade a bare area is called ...

- b) First species
- b) Pioneer species
- c) Starting species
- d) Introductory species

Correct answer: (b)

K V Ramavarmapuram
CLASS XII BIOLOGY MCQ QUESTIONS

1. Bacteria protect themselves from viruses by fragmenting viral DNA with

- a. Ligase
- b. Endonuclease
- c. Exonuclease
- d. Gyrase

Ans: Endonuclease.

2. RNA interference helps in

- a. Cell proliferation
- b. Micropropagation
- c. Cell defence
- d. Cell differentiation

Ans: Cell –defence.

3. Which bacterium is used in the production of insulin by genetic engineering?

- a. *Saccharomyces*
- b. *Rhizobium*
- c. *Escherichia*
- d. *Mycobacterium*

Ans: *Escherichia*

4. ----- has the maximum genetic diversity in India

- 1. Potato
- 2. Tea
- 3. Mango
- 4. Teak

Ans: Mango

5. Galápagos finches are a good example of _____

- 1. Extinction
- 2. Heterochromia
- 3. Island gigantism
- 4. Adaptive radiation

Ans: Adaptive radiation

6.----- is the forest cover to be maintained as per the National Forest Policy (1988)

1. 67% for hills & 33% for plains
2. 37% for hills & 11% for plains
3. 17% for hills & 23% for plains
4. None of the above

Ans: 67% for Hills and 33% for plains

7.Both B & T lymphocytes are produced in the bone marrow; however, only the T lymphocytes travel to the _____ and mature there.

1. Spleen
2. Thymus
3. Pituitary gland
4. Adrenal gland

Ans: Thymus

8. Embryo sac is located inside the

1. Stigma
2. Ovule
3. Micropyle
4. Style

Ans: Ovule

9.The reason behind the anti-parallel strand of DNA is

1. Hydrogen bond
2. Ionic bond
3. Phosphodiester bond
4. Disulphide bond

Ans: Phosphodiester bond.

10. High biological oxygen demand in a water body means _____

- a. Water is not polluted
- b. Water is polluted
- c. Waterbody contains lots of lifeforms
- d. None of the above

Ans: Water is polluted