



## BIOLOGY

### BOOKS - TRUEMAN BIOLOGY

#### AIPMT-(2015)(Re-conducted by CBSE)(solved paper

#### Mcqs

1. Root pressure develops due to

- A. Increase in transpiration
- B. Active absorption
- C. Low osmotic potential in soil
- D. Passive absorption

**Answer:**



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2. Which one is a wrong statement?

- A. Brown algae have chlorophyll a and c, and fucoxanthin
- B. Archegonia are found in Bryophyta, Pteridophyta and Gymnosperms
- C. Mucor has biflagellate zoospores
- D. Haploid endosperm is typical feature of gymnosperms

**Answer:**

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3. Which of the following structures is not found in a prokaryotic cell ?

- A. Plasma membrane
- B. Nuclear envelope
- C. Ribosome

D. Mesosome

**Answer:**



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4. Which one of the following animals has two separate circulatory pathways /

A. Shark

B. Frog

C. Lizard

D. Whale

**Answer:**



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5. Most animals that live in deep oceanic waters are

- A. Detritivores
- B. vPrimary consumers
- C. Secondary consumers
- D. Tertiary consumers

**Answer:**



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6. An association of individuals of different species living in the same habitat and having functional interactions is

- A. Population
- B. Ecological niche
- C. Biotic community
- D. Ecosystem

**Answer:**



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7. The oxygen evolved during photosynthesis comes from water molecules. Which one of the following pairs of elements is involved in this reaction?

- A. Magnesium and Chlorine
- B. Manganese and Chlorine
- C. Manganese and Potassium
- D. Magnesium and Molybdenum

**Answer:**



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8. Axile placentation is present in

A. Argemone

B. Dianthus

C. Lemon

D. Pea

**Answer:**

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9. In which of the following both pairs have correct combination?

<p>(1) Gaseous nutrient cycle Sedimentary nutrient cycle</p>	<p>Carbon and Nitrogen Sulphur and Phosphorus</p>
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(2) Gaseous nutrient cycle Sedimentary nutrient cycle	Carbon and sulphur Nitrogen and Phosphorus
(3) Gaseous nutrient cycle Sedimentary nutrient cycle	Nitrogen and sulphur Carbon and Phosphorus
(4) Gaseous nutrient cycle Sedimentary nutrient cycle	Sulphur and Phosphorus Carbon and Nitrogen



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10. In mammalian eye, the 'fovea' is the centre of the visual field, where

- A. high density of rods occur, but has no cones
- B. high density of cones occur, but has no rods
- C. the optic nerve leaves the eye
- D. None of these

**Answer:**



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**11. Choose the wrong statement**

- A. Yeast is unicellular and useful in fermentation
- B. Penicillium is multicellular and produces antibiotics
- C. Neurospora is used in the study of biochemical genetics
- D. Morels and truffles are poisonous mushrooms

**Answer:**



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**12. Which of the following are not membrane bound ?**

- A. Mesosomes



B. Vacuoles

C. Ribosomes

D. Lysosomes

**Answer:**



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**13.** In which of the following intersections both partners are adversely affected ?

A. Mutualism

B. Competition

C. Predation

D. Parasitism

**Answer:**



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14. A colour blind man marries a woman with normal sight who has no history of colour blindness in her family. What is the probability of their grandsons being colour blind?

A. 0.25

B. 0,5

C. 1

D. NIL

**Answer:**



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15. Ectopic pregnancies are referred to as

A. Pregnancies terminated due to hormonal imbalance

B. Pregnancies with genetic abnormality.

C. Implantation of embryo at site other than uterus

D. Implantation of defective embryo in the uterus

**Answer:**



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**16.** Cellular organelles with membranes are

A. Lysosomes, Golgi apparatus and mitochondria

B. Nuclei, ribosomes and mitochondria

C. Chromosomes, ribosomes and endoplasmic reticulum

D. Endoplasmic reticulum, ribosomes and nuclei

**Answer:**



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17. Cell wall is absent in:

- A. Nostoc
- B. Aspergillus
- C. Funaria
- D. Mycoplasma

**Answer:**



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18. the term 'linkage' was coined by :

- A. W. Sutton
- B. T.H.Morgan
- C. T. Boveri
- D. G. Mendel

**Answer:**



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**19.** Which of the following biomolecules does have phosphodiester bond

- A. Nucleic acids in a nucleotide
- B. Fatty acids in a diglyceride
- C. Monosaccharides in a polysaccharide
- D. Amino acids in a polypeptide

**Answer:**



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**20.** The primary dentition in human differs from permanent dentition in not having one of the following type of teeth

A. Incisors

B. Canine

C. Premolars

D. Molars

**Answer:**



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**21.** A protoplast is a cell

A. without cell wall

B. without plasma membrane

C. without nucleus

D. undergoing division

**Answer:**



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22. In which group of organisms the cell walls form two thin overlapping shells which fit together

- A. Slime moulds
- B. Chrysophytes
- C. Euglenoids
- D. Dinoflagellates

**Answer:**



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23. The DNA molecule to which the gene of interest is integrated for cloning is called

- A. Carrier
- B. Transformer

C. Vector

D. Template

**Answer:**



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**24.** Male gametophyte in angiosperms produces:

A. Three sperms

B. Two sperms and a vegetative cell

C. Single sperm and a vegetative cell

D. Single sperm and two vegetative cells

**Answer:**



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25. Coconut water from a tender coconut is:

- A. Degenerated nucellus
- B. Immature embryo
- C. Free nuclear endosperm
- D. Innermost layers of the seed coat

**Answer:**



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26. The species confined to a particular region and not found elsewhere is termed as

- A. Rare
- B. Keystone
- C. Alien
- D. Endemic

**Answer:**



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**27. Metagenesis refers to**

- A. Presence of a segmented body and parthenogenetic mode of reproduction
- B. Presence of different morphic forms
- C. Alternation of generation between asexual and sexual phases of an organism
- D. Occurrence of a drastic change in form during post-embryonic development

**Answer:**



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28. The enzyme that is not present in succus entericus is

- A. lipase
- B. maltase
- C. nucleases
- D. nucleosidase

**Answer:**



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29. Eutrophication of water bodies leading to killing of fishes is mainly due to non-availability of:

- A. oxygen
- B. food
- C. light
- D. essential minerals

**Answer:**



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**30.** The function of the gap junction is to

- A. stop substance from leaking across a tissue
- B. performing cementing to keep neighbouring cells together
- C. Facilitate communication between adjoining cells by connecting the cytoplasm for rapid transfer of ions, small molecules and some large molecules
- D. separate two cells from each other

**Answer:**



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**31. Match the following list of microbes and their importance**

- |  |  |
|--|--|
| (a) <i>Saccharomyces cerevisiae</i>    | (i) Production of immunosuppressants                 |
| (b) <i>Monascus purpureus</i>          | (ii) Ripening of Swiss cheese                        |
| (c) <i>Trichoderma polysporum</i>      | (iii) Commercial production of ethanol               |
| (d) <i>Propionibacterium sharmanii</i> | (iv) Production of blood-cholesterol lowering agents |

- A.        (a)    (b)    (c)    (d)  
          (iii)   (i)    (iv)   (ii)
- B.        (a)    (b)    (c)    (d)  
          (iii)   (iv)    (i)    (ii)
- C.        (a)    (b)    (c)    (d)  
          (iv)   (iii)   (ii)   (i)
- D.        (a)    (b)    (c)    (d)  
          (iv)   (ii)    (i)    (iii)

**Answer:**



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**32. Arrange the following events of meiosis in correct sequence**

- (i) Crossing over
- (ii) Synapsis
- (iii) Terminalisation of chiasmata
- (iv) Disappearance of nucleolus

A. (b), (c), (d), (a)

B. (b), (a), (d), (c)

C. (b), (a), (c), (d)

D. (a), (b), (c), (d)

**Answer:**



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**33.** The cutting of DNA at specific locations became possible with the discovery of

A. Ligases

B. Restriction enzymes

C. Probes

D. Selectable markers

**Answer:**

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**34.** During biological nitrogen fixation, inactivation of nitrogenase by oxygen poisoning is prevented by

- A. Cytochrome
- B. Leghaemoglobin
- C. Xanthophyll
- D. Carotene

**Answer:**

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**35.** Grafted kidney may be rejected in a patient due to

- A. Innate immune response
- B. Humoral immune response

C. Cell-mediated immune response

D. Passive immune response

**Answer:**



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**36.** The body cells in cockroach discharge their nitrogenous waste in the haemolymph mainly in the form of

A. Calcium carbonate

B. Ammonia

C. Potassium urate

D. Urea

**Answer:**



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37. Filiform apparatus is characteristic feature of

- A. Synergids
- B. Generative cell
- C. Nucellarembryo
- D. Aleuronecell

Answer:



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38. Acid rain is caused by increase in the atomospheric concentration of

- A.  $O_3$  and dust
- B.  $SO_2$  and  $NO_2$
- C.  $SO_3$  and  $CO$
- D.  $CO_2$  and  $CO$

**Answer:**



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**39.** A single large shield shape terminal cotyle-don is monocot embryo is called

- A. Coleoptile
- B. Epiblast
- C. Coleorrhiza
- D. Scutellum

**Answer:**



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**40.** Among China rose, mustard, brinjal, potato, guava, cucumber, onion and tulip, how many plants have superior ovary ?

A. Four

B. Five

C. Six

D. Three

**Answer:**



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**41.** Which of the following is not a function of the skeletal system?

A. Locomotion

B. Production of erythrocytes

C. Storage of minerals

D. Production of body heat

**Answer:**



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

- A. Vitamin A
- B. Vitamin B
- C. VitaminC
- D. Omega3

**Answer:**



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43. Chromatophores taken part in

- A. Respiration
- B. Photosynthesis
- C. Growth

## D. Movement

**Answer:**



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**44.** Select the wrong statement

- A. Mosaic disease in tobacco and AIDS in human being are caused by viruses
- B. The viroids were discovered by D.J. Ivanowski
- C. W.M. Stanley showed that viruses could be crystallized
- D. The term 'contagium vivum fluidum' was coined by M.W. Beijerinck

**Answer:**



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**45.** A pleiotropic gene

- A. controls multiple traits in an individual
- B. is expressed only in primitive plants
- C. is a gene evolved during Pliocene
- D. controls a trait only in combination with another gene

**Answer:**



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**46.** Human urine is usually acidic because

- A. hydrogen ions are actively secreted into the filtrate
- B. the sodium transporter exchanges one hydrogen ion for each sodium ion, in peritubular capillaries
- C. excreted plasma proteins are acidic

D. potassium and sodium exchange generates acidity

**Answer:**



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**47.** Auxin can be bioassayed by

- A. Lettuce hypocotyl elongation
- B. Avena coleoptile curvature
- C. Hydroponics
- D. Potometer

**Answer:**



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48. Which of the following events is not associated with ovulation in human female?

- A. LH surge
- B. Decrease in estradiol
- C. Full development of Graafian follicle
- D. Release of secondary oocyte

**Answer:**



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49. Body having meshwork of cells, internal cavities lined with food filtering flagellated cells and indirect development are the characteristics of phylum

- A. Protozoa
- B. Coelenterata



C. Porifera

D. Mollusca

**Answer:**



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50. Which one of the following hormones is not involved in sugar metabolism ?

A. Glucagon

B. Cortisone

C. Aldosterone

D. Insulin

**Answer:**



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51. Which of the following diseases is caused by a protozoan?

A. Blastomycosis

B. Syphilis

C. Influenza

D. Babesiosis

**Answer:**



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52. Outbreeding is an important strategy of animal husbandry because it

A. exposes harmful recessive genes that are eliminated by selection

B. helps in accumulation of superior genes.

C. is useful in producing purelines of animals

D. is useful in overcoming inbreeding depression

**Answer:**



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**53.** A childless couple can be assisted to have a child through a technique called GIFT. The full form of this technique is:-

- A. Germ cell internal fallopian transfer
- B. Gamete inseminated fallopian transfer
- C. Gamete intra fallopian transfer
- D. Gamete internal fertilization and transfer

**Answer:**



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**54.** A jawless fish, which lays eggs in fresh water and whose ammocoetes larvae after metamorphosis return to the ocean is

A. Petromyzon

B. Eptatretus

C. Myxine

D. Neomyxine

**Answer:**



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**55.** The structures that help some bacteria to attach to rocks and l or host tissues are (

A. Holdfast

B. Rhidos

C. Fimbriae

D. Mesosomes

**Answer:**

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56. If you suspect major deficiency of antibodies in a person, to which of the following would you look for confirmatory evidence ?

- A. Serumglobulins
- B. Fibrinogen in plasma
- C. Serum albumins
- D. Haemocytes

**Answer:**

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57. In human females, meiosis-II is not completed until

- A. birth
- B. puberty

C. fertilization

D. uterine implantation

**Answer:**



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**58.** Which of the following layers in an antral follicle is acellular?

A. Zona pellucida

B. Granulosa

C. Theca interna

D. Strama

**Answer:**



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59. In his classic experiments on pea plants Mendel did not use

- A. Flower position
- B. Seed colour
- C. Pod length
- D. Seed shape

**Answer:**



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60. Which one of the following fruits is parthenocarpic ?

- A. Banana
- B. Brinjal
- C. Apple
- D. Jackfruit

**Answer:**



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**61.** In angiosperms, microsporogenesis and megasporogenesis

- A. occur in ovule
- B. occur in anther
- C. form gametes without further divisions
- D. involve meiosis

**Answer:**



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**62.** A gene showing codominance has

- A. both alleles independently expressed in the heterozygote



- B. one allele dominant on the other
- C. alleles tightly linked on the same chromosome
- D. alleles that are recessive to each other

**Answer:**



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**63.** The chitinous exoskeleton of arthropod is formed by the polymerization of

- A. lipoglycans
- B. keratin sulphate and chondroitin sulphate
- C. D-glucosamine
- D. N-acetyl glucosamine

**Answer:**



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64. The imperfect fungi which are decomposers of litter and help in mineral cycling belong to

- A. Ascomycetes
- B. Deuteromycetes
- C. Basidiomycetes
- D. Phycomycetes

**Answer:**



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65. The wings of a bird and the wings of an insect are

- A. homologous structures and represent convergent evolution
- B. homologous structures and represent divergent evolution
- C. analogous structures and represent convergent evolution

D. phylogenetic structures and represent divergent evolution

**Answer:**



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**66.** Flowers are unisexual in

A. Onion

B. Pea

C. Cucumber

D. China rose

**Answer:**



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67. Increase in concentration of the toxicant at successive trophic levels is known as

- A. Biogeochemical cycling
- B. Biomagnification
- C. Biodeterioration
- D. Biotransformation

**Answer:**



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68. Destruction of the anterior horn cells of the spinal cord would result in loss of

- A. Integrating impulses
- B. Sensory impulses
- C. Voluntary motor impulses

D. Commissural impulses

**Answer:**



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69. Roots play insignificant role in absorption of water in

A. Wheat

B. Sunflower

C. Pistia

D. Pea

**Answer:**



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70. Match the columns and identify the correct options

Column I		Column II
1. Thylakoids	(i)	Disc-shaped sacs in Golgi apparatus
2. Cristae	(i)	Condensed structure of DNA
3. Cristarnae	(iii)	Flat membranous sacs in stroma
4. Chromatin	(iv)	Infoldings in mitochondria

- A. (a) (b) (c) (d)  
(iii) (iv) (ii) (i)
- B. (a) (b) (c) (d)  
(iv) (iii) (i) (ii)
- C. (a) (b) (c) (d)  
(iii) (iv) (i) (ii)
- D. (a) (b) (c) (d)  
(iii) (i) (iv) (ii)

**Answer:**



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71. Identify the correct order of organisation of genetic material from largest to smallest.

- A. Chromosome, genome, nucleotide, gene

B. Chromosome, gene, genome, nucleotide

C. Genome, chromosome, nucleotide, gene

D. Genome, chromosome, gene, nucleotide

**Answer:**



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72. Which one of the following hormones though synthesised elsewhere is stored and released by the master gland ?

A. Melanocyte stimulating hormone

B. Antidiuretic hormone

C. Luteinizing hormone

D. Prolactin

**Answer:**



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73. Read the different components from (1) to (4) in the list given and tell the correct order of the components with reference to their arrangement from outer side to inner side in a woody dicot stem

- (i) Secondary      (ii) Wood  
(iii) Secondary phloem      (iv) Pith

The correct order is

- A. (d), (c), (a), (b)  
B. (c), (d), (b), (a)  
C. (a), (b), (d), (c)  
D. (d), (a), (c), (b)

**Answer:**



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74. Which of the following joints would allow to movement?



A. Ball and Socket joint

B. Fibrous joint

C. Cartilaginous joint

D. Synovial joint

**Answer:**



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75. which one of the following is not applicable to RNA

A. Chargaff's rule

B. Complementary base pairing

C. 5' phosphoryl and 3' hydroxyl ends

D. Heterocyclic nitrogenous bases

**Answer:**



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76. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when

- A. AV node receives signal from SA node
- B. AV valves open up
- C. Ventricular walls vibrate due to gushing of blood from atria
- D. Semilunar valves close down after the blood flows into vessels from ventricles

**Answer:**

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77. During ecological succession:

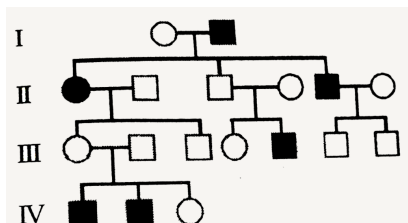
- A. the changes lead to a community that is in near equilibrium with the environment and is called pioneer community

- B. the gradual and predictable change in species composition occurs in a given area
- C. the establishment of a new biotic community is very fast in its primary phase
- D. the number and types of animals remain constant

**Answer:**

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**78.** In the following human pedigree, the filled symbols represent the affected individuals. Identify the type of given pedigree



- A. X-linked dominant
- B. Autosomal dominant

C. X-linked recessive

D. Autosomal recessive

**Answer:**



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**79.** Balbiani rings are sites of

A. RNA and protein synthesis

B. Lipid synthesis

C. Nucleotide synthesis

D. Polysaccharide synthesis

**Answer:**



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80. Name the pulmonary disease in which alveolar surface area involved in gas exchange is drastically reduced due to damage in the alveolar walls

- A. Asthma
- B. Pleurisy
- C. Emphysema
- D. Pneumonia

**Answer:**



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81. Which the following are most suitable indicators of  $SO_2$  pollution in the environment ?

- A. Fungi
- B. Lichens
- C. Conifers

D. Algae

**Answer:**

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**82.** Satellite DNA is important because it

- A. Codes for enzymes needed for DNA replication
- B. Codes for proteins needed in cell cycle
- C. Shows high degree of polymorphism in population and also the same degree of polymorphism in an individual, which is heritable from parents to children
- D. Does not code for proteins and is same in all members of the population

**Answer:**

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83. Industrial melanism is an example of

- A. Neo Lamarckism
- B. Neo Darwinism
- C. Natural selection
- D. Mutation

**Answer:**



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84. A column of water within xylem vessels of tall trees does not break under its weight because of

- A. Positive root pressure
- B. Dissolved sugars in water
- C. Tensile strength of water

D. Lignification of xylem vessels

**Answer:**



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**85.** The introduction of t-DNA into plants involves

- A. Allowing the plant roots to stand in water
- B. Infection of the plant by *Agrobacterium tumefaciens*
- C. Altering the pH of the soil, then heat , shocking the plants
- D. Exposing the plants to cold for a brief period

**Answer:**



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**86.** Pick up the wrong statement.



- A. Nuclear membrane is present in Monera
- B. Cell wall is absent in Animalia
- C. Protista have photosynthetic and heterotrophic modes of nutrition
- D. Some fungi are edible

**Answer:**



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**87.** In photosynthesis, the light independent reactions take place at

- A. Stromal matrix
- B. Thylakoid lumen
- C. Photosystem I
- D. Photosystem II

**Answer:**



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88. Which of the following immunoglobulins does constitute the largest percentage in human milk?

A. IgG

B. IgD

C. IgM

D. IgA

**Answer:**



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89. Match the disease with its correct type of vaccine

- |                    |                        |
|--------------------|------------------------|
| (A) tuberculosis   | (i) harmless virus     |
| (B) whooping cough | (ii) inactivated toxin |
| (C) diphtheria     | (iii) Killed bacteria  |
| (D) polio          | (iv) harmless bacteria |



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**90.** The UN Conference of Parties on climate change in the year 2012 was held at:

A. Warsaw

B. Durban

C. Doha

D. Lima

**Answer:**



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