



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 prokaryotic cells ?

- 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. Primary 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 intersections 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. 1) Magnesium and Chlorine
- B. 2) Manganese and Chlorine
- C. 3) Manganese and Potassium
- D. 4) 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. which of the following both pairs have correct combination:

- | | |
|----------------------------|-------------------------|
| (1) Gaseous nutrient cycle | Sulphur and Phosphorus |
| Sedimentary nutrient cycle | Carbon and Nitrogen |
| (2) Gaseous nutrient cycle | Carbon and Nitrogen |
| Sedimentary nutrient cycle | Sulphur and Phosphorus |
| (3) Gaseous nutrient cycle | Carbon and Sulphur |
| Sedimentary nutrient cycle | Nitrogen and Phosphorus |
| (4) Gaseous nutrient cycle | Nitrogen and Sulphur |
| Sedimentary nutrient cycle | Carbon and Phosphorus |



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



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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. 1) Mesosomes

B. 2)Vacuoles

C. 3)Ribosomes

D. 4)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. 1)Incisors

B. 2)Canine

C. 3)Premolars

D. 4)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 body 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. 1) stop substance from leaking across a tissue
- B. 2) performing cementing to keep neighbouring cells together
- C. 3) Facilitate communication between adjoining cells by connecting the cytoplasm for rapid transfer of ions, small molecules and some large molecules
- D. 4) 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 :

- (a) Crossing over
- (b) Synapsis
- (c) Terminalisation of chiasmata
- (d) 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 :

1. generative cell
2. nucellar embryo
3. aleurone cell
4. synergids

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. The wheat grain/maize grain has an embryo with one, large, shield shaped cotyledon known as:

1. epiblast

2. coleorhiza

3. scutellum

4. coleoptile

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. 1)Four

B. 2)Five

C. 3)Six

D. 4)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 incorporated gene is meant for biosynthesis of:

- A. Vitamin A
- B. Vitamin B
- C. Vitamin C
- D. Omega 3

Answer:



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43. Chromatophores take 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

1. is expressed only in primitive plants
2. is a gene evolved during pliocene
3. controls a trait only in combination with another gene
4. controls multiple traits in an individuals

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. 1)hydrogen ions are actively secreted into the filtrate

B. 2)the sodium transporter exchanges one hydrogen ion for each sodium ion, in peritubular capillaries

C. 3)excreted plasma proteins are acidic

D. 4)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 ammocoete larve after metamorphosis return to ocean is

- A. 1)Petromyzon
- B. 2)Eptatretus
- C. 3)Myxine
- D. 4)Neomyxine

Answer:

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55. The structure that help some bacteria to attach to rocks and host tissues are

- A. Holdfast
- B. Rhizoid
- 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 experiment 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 angiosperm , 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 arthropods is formed by the polymerisation 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:

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

1. Sensory impulses
 2. Voluntary motor impulses
 3. Commissural impulses
 4. Integrating impulses
-
- A. Integrating impulses
 - B. Sensory impulses
 - C. Voluntary motor impulses
 - D. Commissural impulses

Answer:

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 option

Column -I

Column-II

Thylakoids

(i) Disc-shaped sacs in golgi apparatus

Cristae

(ii) Condensed structure of DNA

Cisternae

(iii) Flat membranous sacs in stroma

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 thought 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 compnents form (1) aot (4) in the list given and tell the correct order of the components with reference rto their arranement from outer side to inner side ina wooday dicot stem

- (i) Secondary (ii) Wood
- (iii) Secondary phelom (iv) Phellem

The corect orders 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 no 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 application 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

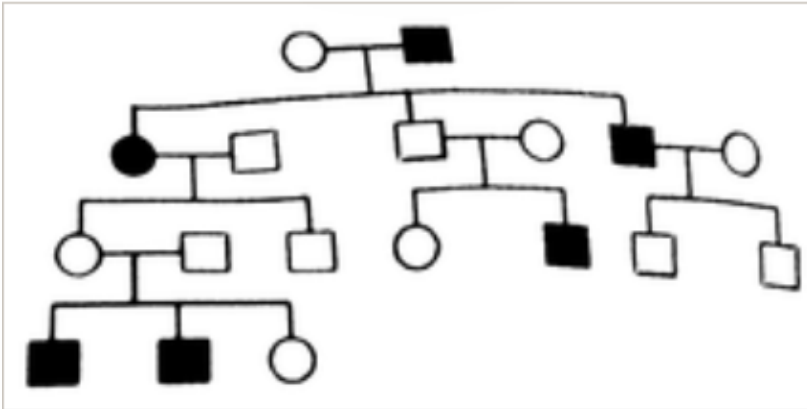
- A. the changes lead to a community that is in near equilibrium with the environment and is called pioneer community
- B. the gradual and predictable change in species composition occurs in a given area
- C. the establishment of a new biotic community is very fast in its primary phase
- D. the number 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 of 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, light independent reactions take place at

- A. Stromal matrix
- B. Thylakoid lumen
- C. Photosystem1 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 in

A. Warsaw

B. Durban

C. Doha

D. Lima

Answer:



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