



BIOLOGY

BOOKS - TRUEMAN BIOLOGY

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

Mcqs

1. Which of the following endoparasites of humans does show viviparity

A. *Enterobius vermicularis*

B. *Trichinella spiralis*

C. *Ascaris lumbricoides*

D. *Ancylostoma duodenale*

Answer:



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2. Cryopreservation of gametes of threatened species in viable and fertile condition can be referred to as

A. Advanced ex-situ conservation of biodiversity

B. In situ conservation by sacred groves

C. In situ cryo-conservation of biodiversity

D. In situ conservation of biodiversity

Answer:



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3. Asexual reproduction occurs in which of the following

A. Hydra

B. Human

C. Monkey

D. Snake

Answer:



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4. Minerals known to be required in large amounts for plant growth include

A. calcium, magnesium, manganese, copper

B. potassium, phosphorus, selenium, boron

C. magnesium, sulphur, iron, zinc

D. phosphorus, potassium, sulphur, calcium

Answer:



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5. Which of the following enhances or induces fusion of protoplasts

A. Polyethylene glycol and sodium nitrate

B. IAA and kinetin

C. IAA and gibberellins

D. sodium chloride and potassium chloride

Answer:



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6. Which of these is not an important components of initiation of parturition in humans?

A. Synthesis of prostaglandins

B. Release of oxytocin

C. Release of prolactin

D. Increase in estrogen and progesterone ratio

Answer:



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7. In which of the following, gametophyte is not independent in free living ?

A. Marchantia

B. Pteris

C. Pinus

D. Funaria

Answer:



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8. Which of the following is not a sexually transmitted disease?

A. Acquired Immuno Deficiency Syndrome

(AIDS)

B. Trichomoniasis

C. Encephalitis

D. Syphilis

Answer:



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9. Leaves become modified into spines in

A. Pea

B. Onion

C. Silk Cotton

D. Opuntia

Answer:



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10. Which one gives the most valid and recent explanation for stomatal movements?

A. Potassium influx and efflux

B. Starch hydrolysis

C. Guard cell photosynthesis

D. Transpiration

Answer:



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11. Which of the following had the smallest brain capacity

A. Homo sapiens

B. Homo neanderthaiensis

C. Homo habilis

D. Homo erectus

Answer:



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12. High value of BOD (Biochemical Oxygen Demand) indicates that

A. Water is highly polluted

B. Water is less polluted

C. Consumption of organic matter in the water is higher by the microbes

D. Water is pure

Answer:



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13. Sliding filament theory can be best explained as

A. Actin and Myosin filaments shorten and slide past each other

B. Actin and Myosin filaments do not shorten but rather slide past each other

C. When myofibrils slide past each other, Myosin filaments shorten while Actin filaments do not shorten

D. When myofilaments slide past each other Actin filaments shorten while Myosin filament do not shorten

Answer:



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14. A gymnast is able to balance his body upside down even in the total darkness because of

A. Vestibular apparatus

B. Tectorial membrane

C. Organ of corti

D. Cochlea

Answer:



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15. A man with blood "A" marries a woman with blood group "B" . What are all the possible blood groups of their offsprings ?

A. A, Band AB only

B. A, B ,AB and O

C. O only

D. A and B only

Answer:



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16. Typical growth curve in plants is

A. Linear

B. Stair-steps shaped

C. Parabolic

D. Sigmoid

Answer:



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17. The UN Conference of Parties on climate change in the year 2011 was held in

A. South Africa

B. Peru

C. Qatar

D. Poland

Answer:



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18. A technique of micropropagation is

A. Somatic embryogenesis

B. Protoplast fusion

C. Embryo rescue

D. Somatic hybridization

Answer:



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19. How many pairs of contrasting characters in pea plants were studied by Mendel in his experiments?

A. Six

B. Eight

C. Seven

D. Five

Answer:

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20. $\oplus \text{♀} \text{K}_{(5)} \overset{\curvearrowright}{\text{C}_{(5)}} \text{A}_{(5)} \text{G}_{(2)}$

is the floral formula of

A. Sesbania

B. Petunia

C. Brassica

D. Allium

Answer:



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21. The crops engineered for glyphosate are resistant/tolerant to

A. Bacteria

B. Insects

C. Herbicides

D. Fungi

Answer:



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22. Which of the following statements is not correct ?

- A. Goblet cells are present in the mucosa of intestine and secrete mucus
- B. Oxyntic cells are present in the mucosa of stomach and secrete HCl
- C. Acini are present in the pancreas and secrete carboxypeptidase
- D. Brunner's glands are present in the submucosa of stomach and secrete pepsinogen

Answer:



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23. In sea urchin DNA, which is double stranded, 17% of the bases were show to be cytosine. The percentages of the other three bases expected to be present in this DNA are

- A. G 17%, A 16.5%, T 32.5%
- B. G 17%, A 33%, T 33%
- C. G 8.5%, A 50%, T 24.5%
- D. G 34%, A 24.5%, T 24.5%

Answer:



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24. In Bt cotton, the Bt toxin present in plant tissue as pro-toxin is converted into active toxin due to

- A. Acidic pH of the insect gut
- B. Action of gut micro-organisms
- C. Presence of conversion factors in insect gut

D. Alkaline pH of the insect gut

Answer:



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25. Cytochromes are found in

A. Outer wall of mitochondria

B. Cristae of mitochondria

C. Lysosomes

D. Matrix of mitochondria

Answer:



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26. Read the following five statements (A to E) and select the option with all correct statement

(A) Mosses and Lichens are the first organisms to colonise a bare rock.

(B) Selaginella is a homoporous pteridophyte.

(C) Coralloid roots in *Cycas* have VAM.

(D) Main plant body in bryophytes is gametophytic whereas in pteridophytes it is sporophytic.

(E) In Gymnoperms, male and female gametophytes are present within sporangla located on sporophyte.

A. (B), (C) and (D)

B. (A), (D) and (E)

C. (B), (C) and (E)

D. (A), (C) and (D)

Answer:



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27. Which one of the following is correct?

A. Serum = Blood + Fibrinogen

B. Lymph = Plasma + RBC + WBC

C. Blood = Plasma + RBC + WBC

D. Plasma = Blood. Lymphocytes

Answer:



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28. The movement of a gene from one linkage group to another is called

- A. Duplication
- B. Translocation
- C. Crossing over
- D. Inversion

Answer:



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29. Which body of the Government of India regulates GM research and safety of introducing GM organisms for public services?

A. Indian Council of Agricultural Research

B. Genetic Engineering Approval
Committee

C. Research Committee on Genetic
Manipulation

D. Bio-safetycommittee

Answer:



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30. Rachel Carson's famous book " Silent Spring " is related to

- A. Noise pollution
- B. Population explosion
- C. Ecosystem management
- D. Pesticide pollution

Answer:



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31. Gastric juices contain:

- A. nuclease, pepsinogen, lipase
- B. pepsinogen, lipase, rennin
- C. amylase, rennin, pepsinogen
- D. maltase, pepsinogen, rennin

Answer:



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32. Which of the following is not one of the prime health risk associated with greater UV radiation through the atmosphere due to depletion of stratospheric ozone ?

A. Reduced Immune System

B. Damage to eyes

C. Increased liver cancer

D. Increased skin cancer

Answer:



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33. Capacitation refers to changes in the

- A. ovum before fertilization
- B. ovum after fertilization
- C. sperm after fertilization
- D. sperm before fertilization

Answer:



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34. Most animals are tree dwellers in a

A. thorn woodland

B. temperate deciduous forest

C. tropical rain forest

D. coniferous forest

Answer:



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35. True nucleus is absent in

A. Mucor

B. Vaucheria

C. Volvox

D. Anabaena

Answer:



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36. Glenoid cavity articulates

A. Scapula with acromion

B. Clavicle with scapula

C. Humerus with scapula

D. Clavicle with acromion

Answer:



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37. Transmission tissue is characteristic feature of

A. Solid style

B. Dry stigma

C. Wetstigma

D. Hollow style

Answer:



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38. DNA is not present in

A. Ribosomes

B. Nucleus

C. Mitochondria

D. Chloroplast

Answer:



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39. Gene regulation governing lactose operon of E.coli that involves the lac I gene product is

A. negative and inducible because

repressor protein prevents transcription

B. negative and repressible because

repressor protein prevents transcription

C. feedback inhibition because excess of β -

galactosidase can switch off transcription

D. positive and inducible because it can be induced by lactose

Answer:



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40. Which of the following does not favour the formation of large quantities of dilute urine?

A. Caffeine

B. Renin

C. Atrial-natriuretic factor

D. Alcohol

Answer:



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41. What causes a green plant exposed to the light on only one side, to bend towards the source of light as it grows

A. Green plants seek light because they are phototropic

B. Light stimulates plant cells on the lighted side to grow faster

C. Auxin accumulates on the shaded side, stimulating greater cell elongation there.

D. Green plants need light to perform photosynthesis

Answer:



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42. Nuclear envelope is a derivative of

- A. Membrane of Golgi complex
- B. Microtubules
- C. Rough endoplasmic reticulum
- D. Smooth endoplasmic reticulum

Answer:



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43. Select the correct option

I
(a) Synapsis aligns homologous chromosomes

II
(i) Anaphase-II

(b) Synthesis of RNA and protein

(ii) Zygotene

(c) Action of enzyme recombinase

(iii) G₂-phase

(d) Centromeres do not separate but chromatids move towards opposite poles

(iv) Anaphase-I

A. a b c d
ii iii i iv

B. a b c d
i ii iii iv

- C. a b c d
 ii iii iv i
- D. a b c d
 ii i iii iv

Answer:



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44. Keel is the characteristic feature of flower of
of

A. Indigofera

B. Aloe

C. Tomato

D. Tulip

Answer:



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45. Perigynous flowers are found in

A. Cucumber

B. China rose

C. Rose

D. Guava

Answer:



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46. A chemical signal that has both endocrine and neural roles is

A. Calcitonin

B. Epinephrine

C. Cortisol

D. Melatonin

Answer:



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

(1) Gaseous nutrient cycle Sedimentary nutrient cycle	Carbon and Nitrogen Sulphur and Phosphorus
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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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48. HIV that causes AIDS, first starts destroying

A. Leucocytes

B. Helper T- Lymphocytes

C. Thrombocytes

D. B- Lymphocytes

Answer:



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49. Hysterectomy is surgical removal of

A. Prostate gland

B. Vas-deference

C. Mammary glands

D. Uterus

Answer:



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50. Removal of proximal convoluted tubule from the nephron will result in

A. Moreconcentrated urine

B. No change in quality and quantity of urine

C. No urine formation

D. More diluted urine

Answer:



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51. A major characteristic of the monocot ropt is the presence of

A. Scattered vascular bundles

B. Vasculature without cambium

C. Cambium sandwiched between phloem
and xylem along the radius

D. Open vascular bundles

Answer:



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52. Which of the following characteristics is mainly responsible for diversification of insects on land?

A. Bilateral symmetry

B. Exoskeleton

C. Eyes

D. Segmentation

Answer:



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53. Which of the following cells during gametogenesis is normally diploid?

- A. Spermatid
- B. Spermatogonia
- C. Secondary polar body
- D. Primary polar body

Answer:



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54. The structure that are formed by stacking of organized flattened membranous sacs in the chloroplasts are

A. Grana

B. Strama lamellae

C. Stroma

D. Cristae

Answer:



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55. The chromosomes in which centromere is situated close to one end are

- A. Acrocentric
- B. Telocentric
- C. Sub-metacentric
- D. Metacentric

Answer:



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56. In a ring girdled plant

- A. The root dies first
- B. The shoot and root die together
- C. Neither root nor shoot will die
- D. The shoot dies first

Answer:



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57. Vertical distribution of different species occupying different levels in a biotic community is known as

A. Stratification

B. Zonation

C. Pyramid

D. Divergence

Answer:



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58. Multiple alleles are present

A. At different loci on the same chromosome

B. At the same locus of the chromosome

C. On non-sister chromatids

D. On different chromosomes

Answer:



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59. The mass of living material at a trophic level at a particular time is called

- A. Standing state
- B. Net primary productivity
- C. Standing crop
- D. Gross primary productivity

Answer:



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60. Which of the following animals, is /are ovoviviparous

A. Elephant

B. Platypus

C. Whale

D. Flying fox (Bat)

Answer:



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61. In an ecosystem the rate of production of organic matter during photosynthesis is termed as

A. Gross primary productivity

B. Secondary productivity

C. Net productivity

D. Net primary productivity

Answer:



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62. Erythropoiesis starts in

A. Liver

B. Spleen

C. Red bone marrow

D. Kidney

Answer:



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63. Which is the most common mechanism of genetic variation in the population of a sexually reproducing organism ?

A. Chromosomal aberrations

B. Genetic drift

C. Recombination

D. Transduction

Answer:



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64. Blood pressure in the mammalian aorta is maximum during

- A. Diastole of the right ventricle
- B. Systole of the left ventricle
- C. Diastole of the right atrium
- D. Systole of the left atrium

Answer:



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65. When you hold your breath, which of the following gas changes in blood would first lead to the urge to breathe

A. rising CO₂ concentration

B. falling CO₂ concentration

C. rising CO₂ and falling O₂ concentration

D. falling O₂ concentration

Answer:



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66. Vascular bundles in monocotyledons are considered closed because

A. Cambium is absent

B. There are no vessels with perforations

C. Xylem is surrounded all around by
phloem

D. A bundle sheath surrounds each bundle

Answer:



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67. Male gametes are flagellated in

A. Anabaena

B. Ectocarpus

C. Spirogyra

D. Polysiphonia

Answer:



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68. Which one of the following may require pollinators, but is genetically similar to autogamy ?

A. Xenogamy

B. Apogamy

C. Cleistogamy

D. Geitonogamy

Answer:



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69. In ginger vegetative propagation occurs through

A. Offsets

B. Bulbils

C. Runners

D. Rhizome

Answer:



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70. Which one of the following is not an inclusion body found in prokaryotes?

A. Cyanophycean granule

B. Glycogen granule

C. Polysome

D. Phosphate granule

Answer:



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71. A somatic cell that has just completed the S phase of its cycle, as compared to gamete of the same species, has

A. same number of chromosome but twice the amount of DNA

B. twice the number of chromosomes and four times the amount of DNA

C. four times the number of chromosomes and twice the amount of DNA

D. twice the number of chromosomes and
twice the amount of DNA

Answer:



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72. Alleles are

- A. true breeding homozygotes
- B. different molecular forms of a gene
- C. heterozygotes

D. different phenotype

Answer:



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73. Select the correct matching in the following pairs

A. Smooth ER-Synthesis of lipids

B. Rough ER-Synthesis of glycogen

C. Rough ER - Oxidation of fatty acids

D. Smooth ER-Oxidation of phospholipids

Answer:



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74. The terga, sterna and pleura of cockroach body are joined by

- A. Muscular tissue
- B. Arthroal membrane
- C. Cartilage

D. Cementing glue

Answer:



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75. Which of the following represents the correct combination without any exception?

Characteristics**Class**

- | | |
|---|----------------|
| (1) Mouth ventral,
gills without
operculum; skin
with placoid
scales; persistent
notochord | Chondrichthyes |
| (2) Sucking and
circular mouth;
jaws absent,
integument
without scales;
paired appendages | Cyclostomata |

(3) Body covered
with feathers; skin
moist and glandular;
fore-limbs
form wings; lungs
with air sacs

Aves

4) Mammary gland;
hair on body; pinnae;
two pairs of Limbs

Mammalia





76. Which one of the following statements is incorrect?

A. In competitive inhibition, the inhibitor molecule is not chemically changed by the enzyme

B. The competitive inhibitor does not affect the rate of breakdown of the enzyme-substrate complex

C. The presence of the competitive inhibitor decreases the K_m of the enzyme for the substrate

D. A competitive inhibitor reacts reversibly with the enzyme to form an enzyme-inhibitor complex

Answer:



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77. Which of the following regions of the brain is incorrectly paired with its function

A. Cerebellum - language comprehension

B. Corpus callosum-communication
between the left and right cerebral
cortices

C. Cerebrum-calculation and contempla-
tion

D. Medulla oblongata - homeostatic control

Answer:



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78. Which one of the following statements is not true

A. Pollen grains of some plants cause severe allergies and bronchial affections in some people

- B. The flowers pollinated by flies and bats secrete foul odour to attract them
- C. Honey is made by bees by digesting - pollen collected from flowers
- D. Pollen grains are rich in nutrients, and they are used in the form of tablets and syrups

Answer:



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79. The active form of *Entamoeba-histolytica* feeds upon

A. mucosa and submucosa of colon only

B. food in intestine

C. blood only

D. erythrocytes, mucosa and submucosa of
colon

Answer:



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80. Which of the following viruses is not transferred through semen of an infected male

A. Human immunodeficiency virus

B. Chikungunya virus

C. Ebola virus

D. Hepatitis B virus

Answer:



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81. A population will not exist in Hardy-Weinberg equilibrium if

- A. There are no mutations
- B. There is no migration
- C. The population is large
- D. Individuals mate selectively

Answer:



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82. The guts of cow and buffalo possess

A. *Chlorella* spp

B. Methanogens

C. Cyanobacteria

D. *Fucus* spp

Answer:



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83. The hilum is a scar on the :

A. Fruit, where it was attached to pedicel

B. Fruit, where style was present

C. Seed, where micropyle was present

D. Seed, where funicle was attached

Answer:



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84. Secondary succession takes place on/in

A. Degraded forest

B. Newly created pond

C. Newly cooled lava

D. Bare rock

Answer:



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85. Which one of the following statements is wrong?

A. Agar -agar is obtained from Gelidium
and Gracilaria

B. Chlorella and Spirulina are used as space
food

C. Mannitol is stored food in
Rhodophyceae

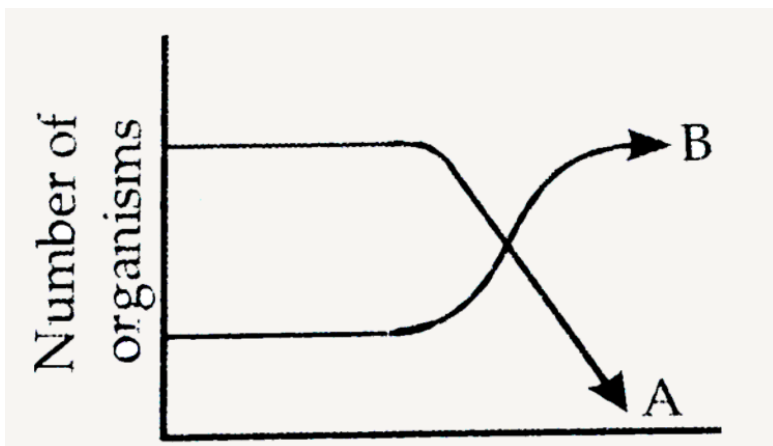
D. Algin and carrageen are products of
algae

Answer:



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86. The following graph depicts changes in two populations (A and B) of herbivores in a grassy field. A possible reason for these changes is that



A. Population B competed more successfully for food than population A

- B. Population A produced more offspring than population B
- C. Population A consumed the members of population B
- D. Both plant populations in this habitat decreased

Answer:



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87. 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 |

A. a b c d
 iii ii iv i

B. a b c d
 iv iii ii i

C. a b c d
 i ii iv iii

D. a b c d
 ii i iii iv

Answer:





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88. Which of the following are the important floral rewards to the animal pollinators ?

- A. Nectar and pollen grains
- B. Floral fragrance and calcium crystals
- C. Protein pellicle and stigmatic exudates
- D. Colour and large size flower

Answer:



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89. An abnormal human baby with 'XXX' sex chromosomes was born due to

A. formation of abnormal ova in the mother

B. fusion of two ova and one sperm

C. fusion of two sperms and one ovum

D. formation of abnormal sperms in the father

Answer:



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90. Transpiration and root pressure cause water to rise in plants by

- A. Pulling and pushing it, respectively
- B. Pushing it upward
- C. Pushing and pulling it, respectively
- D. Pushing it upward

Answer:



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