



BIOLOGY

BOOKS - A2Z BIOLOGY (HINGLISH)

MOCK TEST 3

Mock Test

1. Selaginella leaf have an outgrowth on adaxial surface called

A. Indusium

B. Stipule

C. Ligule

D. Petiole

Answer: C



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2. Rate of respiration is directly affected by

A. Concentration of carbon dioxide

B. Oxygen in trachea

C. Concentration of oxygen

D. Diaphragm expansion

Answer: A



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3. Total oxygen that can be carried by blood is

A. 1000-1200 ml

B. 2000-3000 ml

C. 200 ml

D. 100 ml

Answer: A



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4. Breaking down of detritus into smaller particles by the earthworm is called

A. Catabolism

B. Fragmentation

C. Humification

D. Leaching

Answer: B



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5. Oxygen dissociation curve of haemoglobin is

A. Sigmoid

B. Hyperbolic

C. Linear

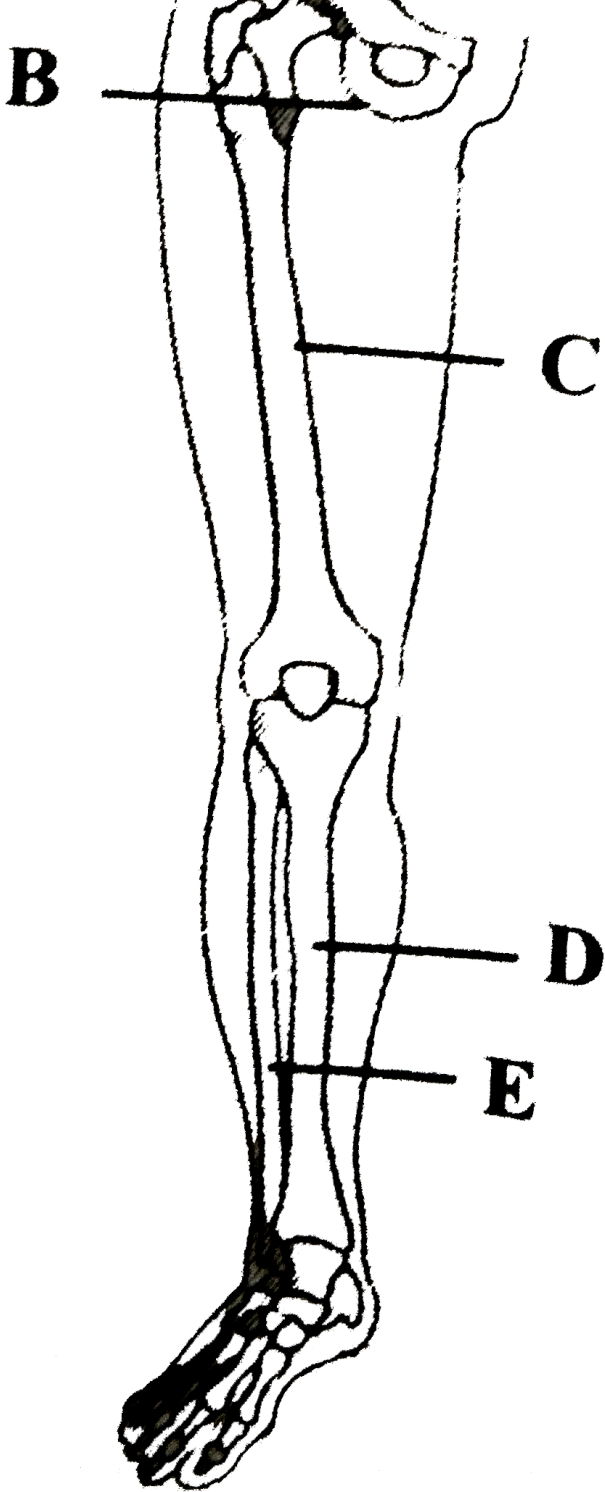
D. Hypobolic

Answer: A

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6. The figure is showing part of right pelvic girdle and lower limb bones. Identify the parts labelled as A to E and select the correct option.





A. a-Sacrum, b-Pubis, c-Patella, d-Metatarsal,
e-Fibula

B. a-Ilium, b-Ischium, c-Femur, d-Tibia, e-
Fibula

C. a-Ilium, b-Ischium, c-Femur, d-Fibula, e-
Tibia

D. a-Ischium, b-Ilium, c-Patella, d-Tibia, e-
Tarsal

Answer: B



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7. Haldane believes oxyhaemoglobin to act as

A. Acid

B. Alkali

C. Buffer

D. None of the above

Answer: A



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8. About 1500 ml of air left in lungs is called

A. Tidal volume

B. Inspiratory reserve volume

C. Residual volume

D. Vital capacity

Answer: C



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9. Mucosal epithelium lining of stomach is protected from concentrated hydrochloric acid by

A. Mucus and bicarbonates

B. Peptidases

C. Lipases

D. Carbonates and sodium ions.

Answer: A



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10. Trachea is lined with incomplete rings of

- A. Fibrous cartilage
- B. Calcified cartilage
- C. Elastic cartilage
- D. Hyaline cartilage

Answer: D



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11. In the pyramid for a hypothetical country, the ratio of reproductive females and pre-reproductive females is > 2 . Based on this data, the population size is expected to

- A. Decrease steadily
- B. Remain roughly similar
- C. Will increase for some time and then become stable
- D. Increase steadily

Answer: A



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12. What is correct ?

A. Rabbit has renal portal system only

B. Frog has renal portal system only

C. Rabbit has both renal and hepatic systems

D. Frog has both renal and hepatic portal systems

Answer: B



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13. Hardy-Weinberg equilibrium is known to be affected by gene flow, genetic drift, mutation, genetic recombination and

A. Saltation

B. Natural selection

C. Evolution

D. Limiting factors

Answer: B



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14. Which of the following chemicals can be used as anticoagulant ?

A. Sodium chloride

B. Sodium citrate

C. Sodium nitrate

D. Ammonium chloride

Answer: B



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15. C_4 and C_3 pathways of *CAM* plants are separated by

A. Bundle Sheath

B. Mesophyll and bundle sheath cells

C. Mesophyll and bundle sheath
chloroplasts

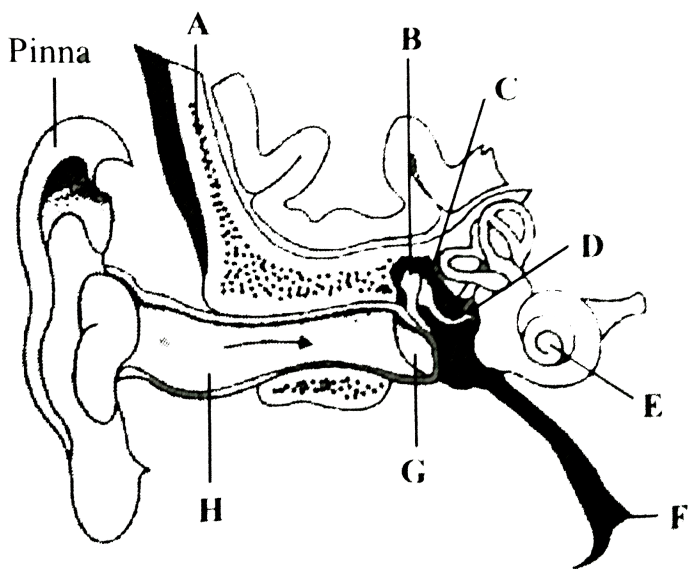
D. Time

Answer: D



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16. A diagram of ear is given here. Identify the parts A to H and select the correct option.



A. a-Temporal bone, b-Malleus, c-Incus, d-
Stapes, e-Cochlea, f-Eustachian tube, g-
Tympanic membrane, h-External auditory
canal

B. a-Timpanic membrane, b-Malleus, c-Incus, d-Stapes, e-Cochlea, f-Eustachian tube, g-Temporal bone, h-External auditory canal.

C. a-Timpanic membrane, b-Incus, c-Malleus, d-Stapes, e-Cochlea, f-Eustachian tube, g-Temporal bone, h-External auditory canal

D. a-Temporal bone, b-Malleus, c-Incus, d-Cochlea, e-Stapes, f-Eustachian tube, g-

Tympanic membrane, h-Externall

auditory canal

Answer: A



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17. Which statement regarding coenzyme is incorrect ?

A. Every coenzyme is a cofactor but every cofactor is not a coenzyme

B. Coenzymes are the active constituents of enzymes

C. Most of the coenzymes are nucleotides and are composed of vitamins.

D. Every coenzyme is a cofactor and every cofactor is a coenzyme.

Answer: A



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18. Dark reactions of photosynthesis occur in

A. Granal thylakoid membranes

B. Stromal lamella membranes

C. Stroma outside photosynthetic lamellae

D. Periplastidial space

Answer: C



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19. Which one of the following does not perform C_4 photosynthesis ?

A. Sacchurum

B. Zea mays

C. Triticum aestivum (= T. vulgare)/Crotolaria)

D. Euphorbia milli (= E. splendens)

Answer: C



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20. The damage to ear by sudden explosion (loud sound) is prevented by

- A. Eustachian tube
- B. Stapedius muscles
- C. Semi-circular canals
- D. Organ of corti

Answer: A



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21. Single seeded fruit develops from

A. Tricarpellary ovary

B. Bicarpellary syncarpous ovary

C. Multicarpellary syncarpous ovary

D. Pistil having single ovule

Answer: D



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22. Inflorescence of Compositae/Asteraceae is

A. Capitulum

B. Hypanthodium

C. Umbel

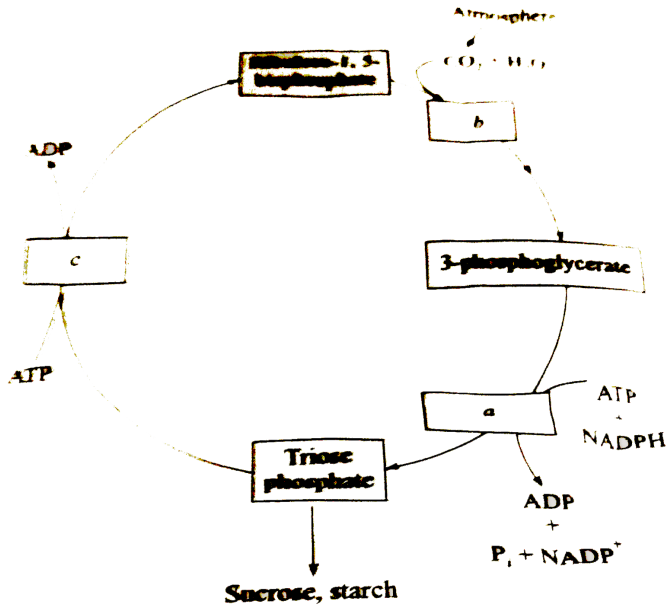
D. Corymb

Answer: A



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23. Find the correct labelling :



A. a-Reduction, b-Oxidation, c-Regeneration

B. a-Regeneration, b-Reduction, c-

Carboxylation

C. α -Carboxylation, β -Reduction, c-
Regeneration

D. α -Reduction, β -Carboxylation, c-
Regeneration

Answer: D



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24. Which is correct pair for edible part ?

A. Tomato-Thalamus

B. Maize-Cotyledons

C. Guava-Mesocarp

D. Date-Mesocarp

Answer: D



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25. Edible part of banana is

A. Epicarp

B. Epicarp and mesocarp

C. Mesocarp and less developed endocarp

D. Endocarp and less developed mesocarp

Answer: C



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26. Choose the correct statement

A. Bacteriophages are viruses that infect
bacteria

B. Bacteriophages are bacteria used in the production of antibiotics

C. Bacteriophages are viruses that have both RNA and DNA

D. Bacteriophages and bacteria that engulf viruses

Answer: A



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27. Even during vigorous exercise, the blood supply does not increase in case of

A. Heart

B. Brain

C. Kidney

D. Skin

Answer: B



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28. Flowers are exclusively bisexual in

A. Cucurbits

B. Euphorbias

C. Malvaceae

D. Asteraceae

Answer: C



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29. In Gramineae/Poaceae, the inflorescence is

A. Spikelet

B. Spadix

C. Cyanthium

D. Corymb

Answer: C



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30. A mutation that inactivates the regulatory gene of a repressible operon in an *E. coli* cell would result in

A. Complete inhibition of transcription of the structural gene controlled by that regulator

B. Irreversible binding of the repressor to the operator

C. Continuous translation of the mRNA transcribed

D. Continuous transcription of the structural gene controlled by that regulator

Answer: C



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31. A vein possesses a larger lumen because

A. Tunica media and tunica externa form a
single coat

B. Tunia interna and tunia media form a
single coat

C. Tunica interna, tunica media and tunica externa are thin

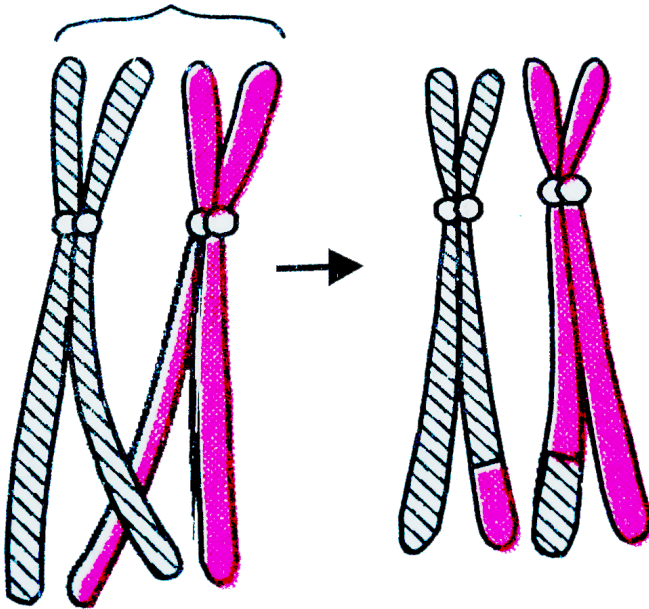
D. Tunica media is a thin coat

Answer: D



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32. The given figure represents



A. Prophase I

B. Prophase II

C. Prophase of mitosis

D. Prophase and metaphase of mitosis

Answer: A



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33. Which one of the following doctors performed the first heart transplant

A. William Harvey

B. Watson

C. Christian Barnard

D. Khorana

Answer: C



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34. Human menstrual cycle is controlled by hormones produced and secreted by :

- A. Uterus only
- B. Pituitary gland and ovaries
- C. Pituitary gland and uterus
- D. Ovaries only

Answer: B



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35. Cardiac output is blood

- A. Receives by heart per minute
- B. Pumped by ventricles per sec
- C. Pumped by each ventricle per minute
- D. Pumped by left ventricle per hour

Answer: C



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36. Iron is attached to globin part of haemoglobin by

A. Coordinate bond

B. Ionic bond

C. Covalent bond

D. Hydrogen bond

Answer: A



37. Erythroblastosis foetalis occurs when a factor from mother passes into foetus through placenta

- A. Rh antigens
- B. Agglutinins
- C. Rh antibodies
- D. ABO antibodies

Answer: C



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38. In human body, the mesozoites of the malarial pathogen divide asexually inside

- A. Thrombocytes and liver cells
- B. Red blood cells
- C. White blood cells
- D. Liver cells

Answer: A



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39. A mismatch during transfusion of blood causes

- A. Agglutination
- B. Erythroblastosis
- C. Haemopoiesis
- D. None of the above

Answer: A



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40. Which is false ?

- A. Blood from right side of heart is carried to lungs by pulmonary artery
- B. Pleura is double covering of kidney
- C. Pancreas is both exocrine and endocrine gland
- D. Scurvy is due to vitamin C deficiency

Answer: B



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41. Choose the correct statement

A. Both phenotypic and genotypic ratios are 1 : 2 : 1 in incomplete dominance

B. Both heterozygous and homozygous recessive organisms have same phenotype in mendelian cross

C. Genes are alternate forms of an allele

D. Multiple alleles occupy multiple positions in a chromosome pair

Answer: A



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42. Abnormal rise in erythrocyte count is

A. Leucopenia

B. Polycythemia

C. Anaemia

D. Pneumonia

Answer: B



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43. Increase in number of leucocytes beyond normal indicates

A. Anaemia

B. Infection

C. Increased defence against pathogen

D. Non-formation of RBC

Answer: B



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44. Which one is the most soluble in water ?

A. Uric acid

B. Urea

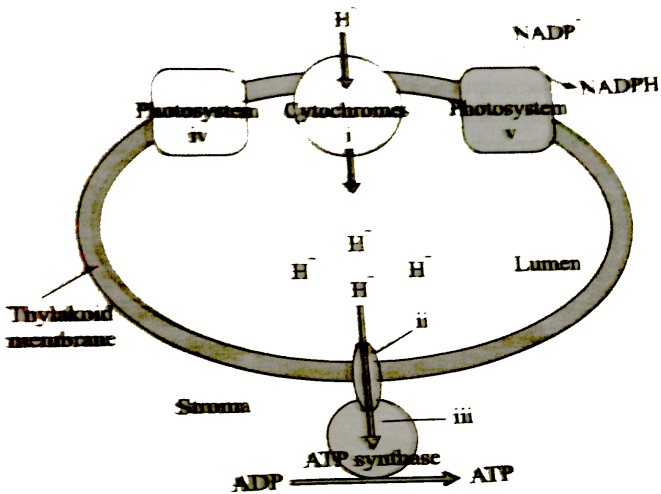
C. Fatty acids

D. Casein

Answer: B

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45. Find the correct labelling :



A. *iv - i, ii - F_o, i - b and c*

B. $iii - F_1, i - b$ and $c, v - ii$

C. $i - b \& f, ii - F_1, iv - ii$

D. $ii - F_o, iv - ii, i - b$ and f

Answer: D



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46. Which blood vessel contains the least amount of urea ?

A. Hepatic portal vein

B. Hepatic vein

C. Renal vein

D. Dorsal aorta

Answer: C



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47. If liver is removed, which component of blood will increase ?

A. Protein

B. Urea

C. Uric acid

D. Neutrophils

Answer: C



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48. Which of the following algae is commonly known as water silk or pond scum or pond silk

A. Spirogyra

B. Ulotrhix

C. Hydrodictyon

D. Chondrus

Answer: A



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49. Effective net filtration pressure in the glomerulus in kidney of man is about

A. + 75 mm Hg

B. + 80 mm Hg

C. + 20 to 25 mm Hg

D. + 50 mm Hg

Answer: C



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50. The characteristic that is shared by urea.

Uric acid and ammonia is/are

(A) They are nitrogenous wastes

(B) They all need very large amount of water for

excretion

(C) They are all equally toxic

(D) They are produced in the kidneys

A. a,c

B. a,b

C. a,c,d

D. a only

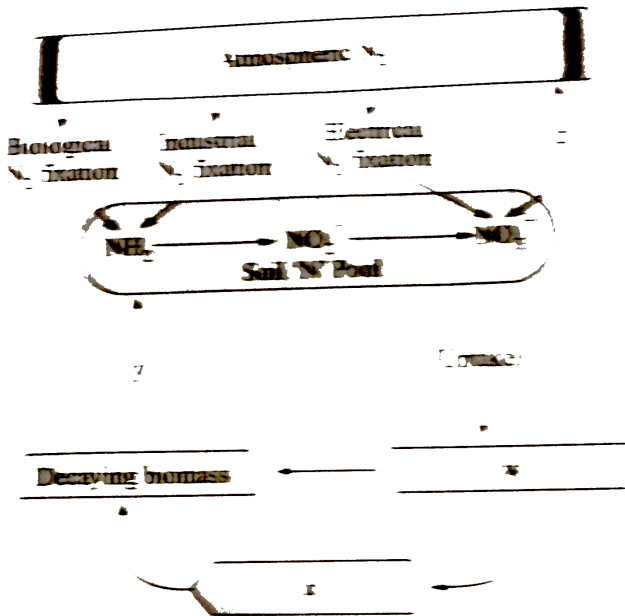
Answer: D



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51. Recognise the figure and find the correct match

- a. Denitrification
- b. Ammonification
- c. Plant biomass
- d. Animal biomass



A. w-d,x-c,y-a,z-b

B. w-d,x-c,y-b,z-a

C. w-c,x-d,y-b,z-a

D. w-c,x-d,y-a,z-b

Answer: C



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52. The nitrogenous excretory products are formed from the catabolism of amino acids by

A. Calvin cycle

B. Nitrogen cycle

C. Ornithine cycle

D. Krebs cycle

Answer: C



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53. How many molecules of ammonia are required to form 8 molecules of urea

A. 24

B. 8

C. 16

D. 4

Answer: C



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54. Find the incorrect statement regarding mechanism of urine formation.

- A. Counter-current systems contribute in diluting urine
- B. Tubular secretion takes place in PCT
- C. Glomerular filtration rate is 125 ml/min
- D. Ultra-filtration is opposed by colloidal osmotic pressure of plasma

Answer: A



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55. In nephron, water absorption is maximum in

- A. Distal convoluted tubule
- B. Proximal convoluted tubule
- C. Glomerulus
- D. Henle's loop

Answer: B



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56. Function of loop of Henle is

A. Conservation of water

B. Formation of urine

C. Filtration of blood

D. Passage of urine

Answer: A



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57. Which one regulates heart beat?

A. Purkinje fibres

B. Cardiac branch of vagus nerve

C. SA node

D. AV node

Answer: B



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58. Which of the following bonds are present

in a DNA double helix ?

a. Hydrogen bond

b. Peptide bond

c. Glycosidic bond

d. Phosphodiester bond

A. a,b and d

B. a,c and d

C. c and d only

D. a and b

Answer: C



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59. Universal donor blood group is

A. A

B. B

C. AB

D. O

Answer: D



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60. In frog, the surface of attachment of tongue is

A. Palatine

B. Sphenoid

C. Pterygoid

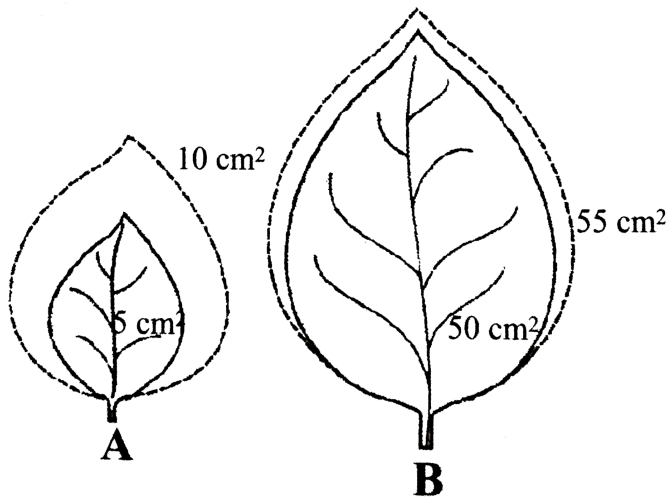
D. Hyoid apparatus

Answer: D



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61. The given figure shows growth of two leaves over the period of one day. If AG = absolute growth and RGR = relative growth rate, then select the correct option.



A. AG for a-1%, RGR for a-1, AG for b-a%, RGR
for b-a

B. AG for a-100%, RGR for a-5, AG for b-10%,

RGR for b-5

C. AG for a-5, RGR for a-100%, AG for b-5,

RGR for b-10%

D. AG for a-5, RGR for a-100%, AG for b-5,

RGR for b-100%

Answer: C



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62. Systole refers to the contraction of

A. AV node

B. SA node

C. Major arteries

D. Atria and ventricles

Answer: D



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63. Comparative study of skulls is

A. Craniology

B. Conchology

C. Malacology

D. Osteology

Answer: A



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64. Trochanters occur in

A. Humerus

B. Femur

C. Radio-ulna

D. Tibio-fibula

Answer: B



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65. Greater trochanter occurs in

A. Humerus

B. Radius

C. Ulna

D. Femur

Answer: B



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66. Extermities of long bones possess cartilage

A. Calcified

B. Fibrous

C. Elastic

D. Hyaline

Answer: D



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67. Heart muscle is sensitive to

- A. Electrical stimuli
- B. Chemical stimuli
- C. Mechanical stimuli
- D. All the above

Answer: D



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68. If DNA content of a dioploid cell is 'z' in the G_1 phase of the cell cycle, then the DNA content of the cell at metaphase I will be

A. $z/2$

B. z

C. $2z$

D. $z/4$

Answer: C



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69. Sarcomere is distance between

- A. Two I-bands
- B. A and I bands
- C. Two Z-lines
- D. Z and A bands

Answer: C



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70. Major protein in thick filaments of skeletal muscle fibre in

A. Myosin

B. Actin

C. Tropomyosin

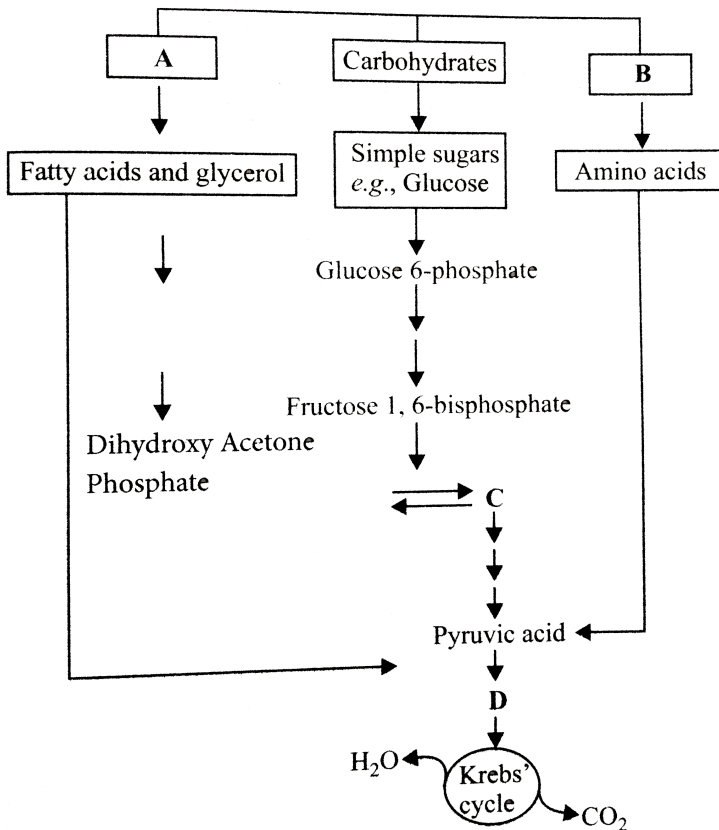
D. Troponin

Answer: A



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71. Refer to the given figure and select the correct option for A,B,C and D.



A. A-Fats, B-Proteins, C-3-PGALm D-Acetyl

CoA

B. A-Fats, B-Proteins, C-3-PGAL, D- CO_2

C. A-Proteins, B-Fats, C-Acetyl CoA, D-PEP

D. A-Proteins, B-Fats, C-PEP, D-Acetyl CoA

Answer: A



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72. Sensation of hearing is a result of

A. Vibrations of ear ossicles

B. Nerve impulses from hair cells of organs
of Corti

C. Vibrations in external auditory meatus

D. Vibrations in ear drum

Answer: B



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73. Vibrations of fenestra ovalis are
transmitted to

A. Endolymph of scala media

B. Endolymph of scala vestibuli

C. Perilymph of scala vestibuli

D. Perilymph of scala tympani

Answer: C



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74. Which one of the following sets of ions is necessary for transmission of nerve impulse ?

A. Na^+ and K^+

B. Ca^{2+} and Na^+

C. Ca^{2+} and K^+

D. Na^+ and Mg^{2+}

Answer: A



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75. In resting nerve, what is true ?

A. $3Na^+$ are pumped in and $2K^+$ pumped out

B. $3Na^+$ are pumped out for every $2K^+$ pumped in

C. There is not Na-K pump

D. Na-K pump stops working

Answer: B



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76. Suppose the terminal ends of axon are in contact with dendrites of four adjacent neurons, the nerve impulse of the axon will

A. Become weak due to distribution into four

B. Travel in all the four neurons with equal strength

C. Pass on to one neuron only

D. Travel to none because the movement of impulse is from dendrite to axon

Answer: B



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77. Synaptic fatigue is due to

- A. Repeated release of acetylcholine
- B. Repeated release of adrenaline
- C. Exhaustion of neurotransmitter
- D. Exhaustion of acetyl cholinesterase

Answer: C



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78. During rest, sodium pump of a nerve results in

A. More Na^+ pumped out than K^+ ions

taken in

B. Na^+ pumped in without exchange with

any other ion

C. Exchanging equal amounts of

Na^+ and K^+

D. More Na^+ being pumped in than K^+ ions pumped out

Answer: A



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79. Chemicals synthesised by one organism that affect behaviour of another member of the same species are called

A. Enzymes

B. Hormones

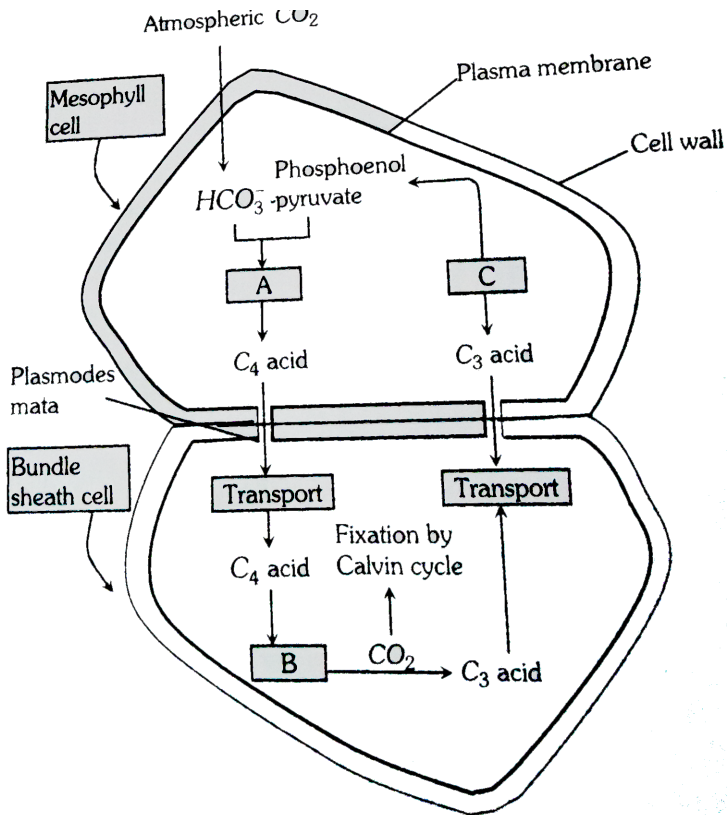
C. Flavoids

D. Pheromones

Answer: D



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80.

In which of the following option correct words for all the three blanks A, B and C are indicated

| | A | B | C |
|-----|-----------------|-----------------|--------------|
| (a) | Decarboxylation | Reduction | Regeneration |
| (b) | Fixation | Transamination | Regeneration |
| (c) | Fixation | Decarboxylation | Regeneration |
| (d) | Carboxylation | Decarboxylation | Reduction |

A. A-decarboxylation, B-reduction, C-regeneration

B. A-fixation, B-transamination, C-regeneration

C. A-fixation, B-decarboxylation, C-regeneration

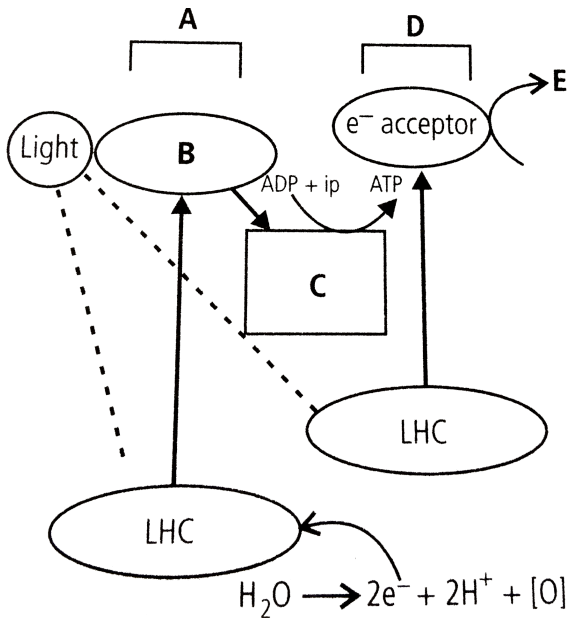
D. A-carboxylation, B-decarboxylation, C-reduction

Answer: C



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81. Identify A,B,C,D and E in the given flow chart showing Z-Scheme of light reaction.



A. a - P_{700} , b - H^+ acceptor, c - e^-

acceptor, d - P_{680} , e - $NADP^+$

B. a-Photo-system I, $b - e^-$ acceptor,
 $c - e^-$ transport system, d-Photo-
system II, e-NADPH

C. a-Photo-system II, $b - H^+$ acceptor,
 $c - e^-$ acceptor, d-Photo-system, e-
NADPH

D. a-Photo-system II, $b - e^-$ acceptor ,
 $c - e^-$ transport system, d-Photo-
system I, e-NADPH

Answer: D



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82. Hormone oxytocin controls

A. Growth

B. Lactation

C. Child birth

D. Both B and C

Answer: D



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83. Hypothyroidism during pregnancy causes

A. Goitre

B. Cretinism

C. Diabetes mellitus

D. Hypoglycemia

Answer: B



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84. Which of the following vertebrae are fused

A. Cervical

B. Sacrum

C. Lumbar

D. Thoracic

Answer: B



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85. Socket in pelvic girdle in which head of femur articulates is formed by fusion of

- A. Ischium and pubis
- B. Ilium and pubis
- C. Ilium and ischium
- D. Ilium, ischium and pubis

Answer: D



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86. Assertion : The fungi are widespread in distribution and they even live on inside other plants and animals.

Reason : Fungi are able to grow anywhere on land, water or on other organisms because they have a variety of pigments, including chlorophyll, carotenoids, fucoxanthin and phycoerythrin.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion

C. If assertion is true but reason is false

D. If both assertion and reason are false

Answer: C



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87. Assertion: Branchiostoma and Balanoglossus are bilaterally symmetrical and triploblastic animals.

Reason: They are exclusively marine and possess notochord

A. If both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion

C. If assertion is true but reason is false

D. If both assertion and reason are false

Answer: C



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88. Assertion : Mitochondria and chloroplasts are semiautonomous organelles.

Reason : They are formed by division of pre-

existing organelles as well as contain DNA but lack protein synthesizing machinery

A. If both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion

C. If assertion is true but reason is false

D. If both assertion and reason are false

Answer: C



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89. Assertion . No sencondary groth takes place in monocots. Reason. Secondary growth is not related to cambium.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion

C. If assertion is true but reason is false

D. If both assertion and reason are false

Answer: C



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90. Assertion : Enzymes lower the activation energy.

Reason : A substrate molecule can be acted upon by a particular enzyme.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion

B. If both assertion and reason are true but reason is not the correct explanation of the assertion

C. If assertion is true but reason is false

D. If both assertion and reason are false

Answer: B



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