BIOLOGY

BOOKS - OSWAL PUBLICATION

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Biology Heredity And Evolution Stage 1

1. The wings of a housefly and the wings of a sparrow are an example of :

A. Analogous organs

B. Vestigial organs

C. Respiratory organs

D. Homologous organs

Answer: A

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2. The recessive character in pea plant in the following

A. Violet flower

B. Axillary flower

C. Round seed

D. Green seed

Answer: D

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3. Haemophilia is more common in males because it is a

A. Recessive character carried by Y chromosome

B. Dominant character carried by Y chromosome

C. Dominant trait carried by X chromosome

D. Recesive trait carried by X chromosome

Answer: D

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4. By using only one of the two strands of DNA, nRNA is produced The process called as _____

A. transcription

B. translation

C. translocation

D. replacement

Answer: B

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Biology Heredity And Evolution Stage 2

1. A plan with red coloured folowers is crossed with a plant having white fllowes. The red and white colour of the flower is controlled by a single gene. Red is domainan over white. The F1 progeny is self-pollinated and the flower colour in F2 is observed. Given the above information what is the expected phenotypic ratio of plants with different flower colours ?

A. All plants with red flowr

B. Red : while in the ratio of 3 : 1

C. Pink : while in the ratio of 3 : 1

D. Red : pink : white in a ratio of 1 : 2 : 1

Answer: B

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Biology Control And Co Ordination Stage 1

1. Cell division in plants is promoted by:

A. Abscisic acid

B. Gibberline

C. Ethylene

D. Cytokinin

Answer: C

2. Fight and flight hormone is

A. Adrenaline

B. Thyroxin

C. Oxytocin

D. Insulin

Answer: C

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Biology Control And Co Ordination Stage 2

1. A squirrel was eating a fruit on the ground. Sudenly, it was attacked by a dog. The squirrel

rushed to the tree immediately and saved itself from the dangerous attack. What immediate changes are most likely to have taken place in the body of the squirrel ?

A. Blood flows to the stomach for rapid digestion.

B. Adrenaline was secreted in the blood by the adrenal glands.

C. Heart beat becomes faster and pumps more blood so that muscles get more oxygen.

D. Adrenocorticotropic hormone is secreted in the blood and blood flows more towards the vital organs.

Select the correct combination of options given below :

A. A and B

B. A and C

C. B and C

D. C and D

Answer: A

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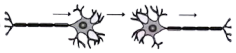
2. Stimulus from the environment is detected by the nerve cells. The simulus acquired is transmitted in the from of electrical impulse. From the options given below choose the correct scheme showing the direction in which the nerve impulse travels. (Arrows shows the direction of impulse flow).

A. 

B. 

C. 

D. 

Answer: C

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Biology Life Process Stage 1

1. ATP is formed by photosynthesizing plant cell by :

A. Photophosphorylation

B. Oxidative Phosphorylation

C. Substrate level phosphorylation

D. All of the above

Answer: A

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2. If a potted plant and a dish containing potassium hydroxide are covered by a sealed container, made up of glass, are kept in sunlight for a week, what will happen:

A. Plant will grow taller

B. Leaf will turn yellow due to no photosynthesis

C. Leaf will turn green due to excess photosyn thesis

D. Leaf will turn yellow due to no oxygen in the jar

Answer: B

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3. Identify the correct sequence for process of energy production from carbohydrates.

A. Carbohydrates $\rightarrow$ Glycolyis $\rightarrow$ Pyruvic acid $\rightarrow$ Acetyl CoA $\rightarrow$ Krebs cycle $\rightarrow CO_2 + H_2O +$ energy

B. Carbohydrates $\rightarrow$ Glycolysis $\rightarrow$ Pyruvic acid $\rightarrow$ Krebs cycle $\rightarrow$ Acetyl CoA $\rightarrow CO_2 + H_2O +$ energy

C. Carbohydrates $\rightarrow$ Glycolysis $\rightarrow$ Acetyl CoA $\rightarrow$ Pyruvic acid $\rightarrow$ Krebs cycle

$\rightarrow CO_2 + H_2O +$ energy

D. Carbohydrates $\rightarrow$ Glycolysis $\rightarrow$ Acetyl CoA $\rightarrow$ Krebs cycle $\rightarrow$ Pyruvic acid $\rightarrow CO_2 + H_2O +$ energy

Answer: A

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4. Identify the correct statements about blood.

A. Platelets are produced in the bone marrow.

B. When haemoglobin combines with oxygen it

forms carboxyhaemoglobin.

C. Calcium ions play an important role in clotting of blood.

D. Fibrins are formed by the conversion of fibrino gen by the enzyme thrombin.

A. A and B only

B. B, C and D only

C. B and D only

D. A, C and D only

Answer: D

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Biology Life Process Stage 2

1. Glucose is the prime source of emergency in our body. However, it is stored in the form of glycogen in the muscle and liver of animal and in the form of starch in plants. As a result, everytime a cell requires glucose, it must hydrolyze glycogen which is an energy consuming process. Why does the cell store glycogen instead of glucose in free form?

A. Glycogen is more compact and more hydro philic.

B. Storage of glucose in free form will consume more ATP.

C. Glucose in the free form creates more osmoticm pressure.

D. Glucose is highly reactive molecule hence stor ing in the free form can result in unwanted re actions in the cells.

Answer: C

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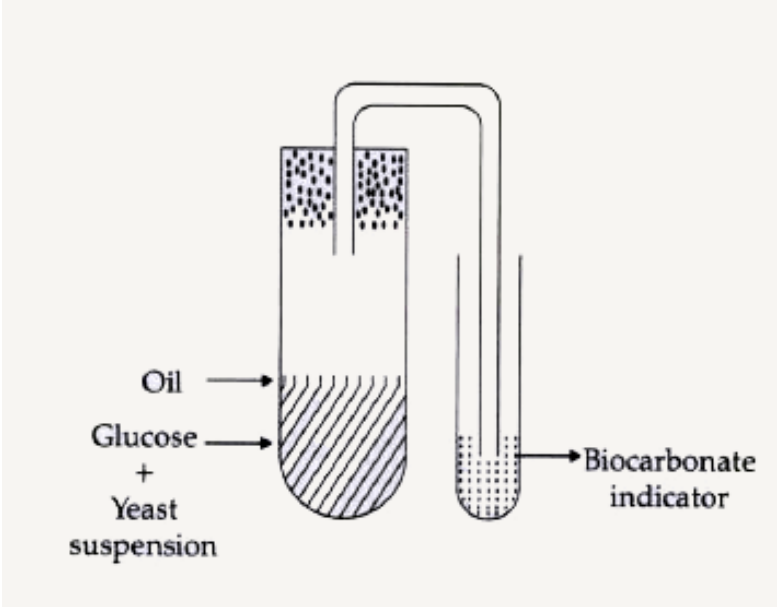
2. The figure given below is designed to show yeast respiration. In one of the tubes, there is yeast suspension in glucose solution. This solution was boiled before yeast was added to it. Which one of the following is the possible

reason for boiling of sugar solution?



A. To ensure aerobic fermentation.

B. To provide the initial warmth for the yeast to become active.

C. To remove the dissolved oxygen and carbon dioxide from the solution.

D. To remove dissolved carbon dioxide and trap the oxygen from the atmosphere.

Answer: C

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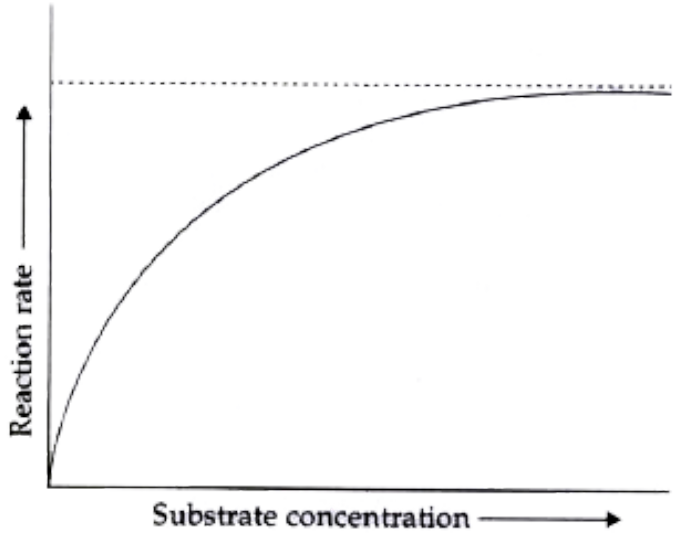
3. A student was performing an experiment to understand the enzyme-substrate reaction. The student measured the formation of coloured product using a colorimeter. The student plotted the graph below which shows

the reaction rate versus the substrate concentration.



Following interpretations were drawn by the student :

a) The higher concentration of substrate acts as anenzyme inhibitor.

b) It is a sigmoidal curve with sharp transition from low to high reaction rates over the

increasing substrate concentration.

c) The curve reaches a plateau and does not further increase with increasing substrate concentrations due to saturation of enzyme with the substrate.

Choose which of the "interpretations of the graph are correct.

A. A and B

B. A arid C

C. B only

D. B and C

Answer: B

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Biology Reproduction In Organisms Stage 1

1. Number of male gametes in the growing pollen tube is :

A. one

B. two

C. three

D. seven

Answer: B

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2. Which of the following is not a secondary reproductive organ?

A. Fallopian tube

B. Uterus

C. Ovary

D. Vagina

Answer: C

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3. Which is the sequence of four whorls of flowers from outside to inside?

A. Calyx $\rightarrow$ Corolia $\rightarrow$ Androecium $\rightarrow$ Gynoecium

B. Gynoecium $\rightarrow$ Androecium $\rightarrow$ Corolla $\rightarrow$ Calyx

C. Calyx $\rightarrow$ Androecium $\rightarrow$ Corolla $\rightarrow$ Gynoecium

D. Gynoecium $\rightarrow$ Corolla $\rightarrow$ Androecium $\rightarrow$ Calyx

Answer: A

Biology Reproduction In Organisms Stage 2

1. "Double fertilization" is a complex mechanism in flowering plants that is also unique to angiosperm. Choose the most appropriate statement from the option listed below that explains this phenomenon.

A. Fertilization in two flowers of the same plant forming endosperms.

B. Two male gametes fertilize two eggs inside the ovule as a result the ovary

gives rise to bigger fruits.

C. Two fertilizations occur in a flower-one fertilizatic results in the formation of a diploid zygote and the second fertilization results in the formation of triploid endosperm.

D. Two pollen grains sending two pollen tubes inside the ovary, resulting in the formation of two seed inside the fruit.

Answer: C

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Biology Our Environment Stage 2

1. Lichens are sensitive to certain air pollutants and are often replaced by other plants. From the given options choose the best combination of sensitivity and replacement of lichens.

A. Sulphur dioxide and moss

B. Sulphur dioxide and algae

C. Carbon dioxide and ferns

D. Sulphur dioxide and grass

Answer: A

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Biology The Fundamental Unit Of Life Stage 2

1. Choose one of the following alternative statements given below which correctly explains the process of osmosis.

A. Movement of water from regions of concentrated to dilute solutions.

B. The passage of solute from weak solution to strong solution through a selectively permeable membrane.

C. A passive transport of a solvent through a selectively permeable membrane from a region of low solute concentration to a region of high solute concentration.

D. An energy dependent transport of a solvent through a selectively permeable membrane from a region of low solute concentration to a region of high solute concentration.

Answer: C

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2. In meiosis, each of the four daughter cells has one set of chromosomes. Due to randomness of process of chromosome separation in meiosis, large number of chromosome combinations can form gametes. How many such chromosome combinations in the gametes are possible in case of humans, assuming there is no crossing over taking place ?

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Biology Tissues Stage 1

1. In a practical laboratory, a student while observing the slide of tissue with the help of a microscope, found a bunch of cylindrical shaped cells having interconnections belong to the category of

A. Adipose tissue

B. Heart muscle

C. Smooth muscle

D. Skeletal muscle

Answer: B

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Biology Tissues Stage 2

1. Sclerenchyma in plants is an example of simple permanent tissue comprising of two types of cells, sclereids and fibres. Why these cells are functionally important to the plants even after they die?

Choose the correct alternative from the options given below.

A. Both are thin walled cells lacking intercellular spaces.

B. Walls in both the types of cells are thick and cutinized.

C. Walls in both the cell types are thick and usually lignified.

D. Both the cells are used for conducting solutes and providing strength to the

plant.

Answer: D

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Biology Diversity In Living Organisms Stage 1

1. A flagellum is present at one end of a protozoan. It is :

A. Planaria

B. Paramecium

C. Hydra

D. Leishmania

Answer: D

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Biology Diversity In Living Organisms Stage 2

1. Which one of the following organisms has a cellular respiratory pigment dissolved in

plasma and is also a predaceous carnivore and shows matriphagy?

A. Scorpion

B. Cockroach

C. Earthworm

D. Sea cucumber

Answer: A

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1. Bacterial disease is :

A. Dengue

B. Poliomyelitis

C. Tuberculosis

D. Chicken pox

Answer: C

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2. It is generally observed that malaria is rampant in area where construction work and/or stagnant water are usually seen. Plasmodium species are known to cause malaria. The parasite when injected by the mosquito into the human blood stream goes through specific life cycle stages. Select from below the correct sequence of stages

A. Mosquito (sporozoites) $\rightarrow$ human liver

(merozoitef $\rightarrow$ human RBC (gametes)

$\rightarrow$ mosquito (zygote oocyst-sporozoites)

B. Mosquito (merozoites) $\rightarrow$ human RBC (gametes) human liver (sporozoites) $\rightarrow$ mosquito (oocyst zygote-sporozoites)

C. Mosquito (merozoites) $\rightarrow$ human liver (sporozoites $\rightarrow$ human RBC (gametes) $\rightarrow$ mosquito (oocyst zygote-sporozoites)

D. Mosquito (sporozoites) $\rightarrow$ human liver (sporozoites $\rightarrow$ human RBC (merozoites) $\rightarrow$ mosquito (zygote oocyst-sporozoites)

Answer: A

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