

BIOLOGY

BOOKS - NTA MOCK TESTS

NTA NEET SET 38

Biology

1. In oocytes of some vertebrates____stage can last for months or years.

- A. Leptotene
- B. Zygotene
- C. Pachytene
- D. Diplotene



- 2. Which of the following has stringing capsule or nematocytes?
 - A. Aurelia
 - B. Taenia
 - C. Pleurobrachia
 - D. Ascaris

Answer: A



3. Which of the phylum contains exclusively marine, radially symmetrical , diploblastic organisms with the tissue level organization?

- A. Platyhelminthes
- B. Ctenophora
- C. Arthropoda
- D. Annelida

Answer: B



- **4.** Select incorrect statements.
- Diplotene stage is not recognized by the dissolution of the synaptonemal complex.

- 2. Recombination nodules contain a recombinase enzyme.
- 3 . Interkinesis is generally short lived .
- 4. In anaphase II separation of homologous chromosomes (bivalents) separate to opposite poles.
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 4
 - D. 1 and 3

Answer: C



5. The structure of the human eye having there layers of cells are

A. Cornea

- B. Ciliary body
- C. Sclera
- D. Retina



- **6.** Both centrioles in a centrosome lie (i) to each other and each of them contains..... (ii) Peripheral fibril with (iii) arrangement of microtubules.
 - A. (i) parallel (ii) triplet (ii) 9+0
 - B. (i) Perpendicular (ii) doublet (iii) 9+2
 - C. (i) parallel (ii) doublet (ii) 9+0
 - D. (i) Perpendicular (ii) triplet (iii) 9+0



- 7. Which is not a symptom of exophthalmic goitre?
 - A. Degenerating sex organs
 - B. Protrusion of eyeball
 - C. Frightened look to the patient
 - D. Hyperthyroidism

Answer: A



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8. Formation of acrosome is the function of

A. Lysosome
B. ER
C. Ribosome
D. Golgi complex
Answer: D
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9. In the following diagram identify the structural and regulatory
proteins of muscles ?
A. A - troponin , C - tropmyosin
B. A - actin , C - troponin
C. B - tropomyosin , A - actin

D. A - troponin , C - actin	
nswer: D	
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0. Nuclear membrane is absent in	
A. Penicillium	
B. Agaricus	

C. Volvox

D. Nostoc

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Answer: D

- 11. in leaves, protoxylem (xylem) elements
 - A. face towards the abaxial surface
 - B. face towards the adaxial surface
 - C. are scattered in the middle
 - D. are surrounded by the metaxylem

Answer: A



- **12.** The U shaped and C shaped structures are
 - A. Hyoid bone and duodenum
 - B. Sternum bone and jejunum
 - C. Hyoid bone and ileum

D.	Hyoid	bone	and	colon
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Answer: A



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13. Collenchyma differs from sclerenchyma in

- A. Having thick walls
- B. Retaining protoplasm at maturity
- C. Being meristematic
- D. Having a wide lumen

Answer: B



14. \	Which is	а	comr	nunica	ating	junction	which	allows	the	cells	to
con	tact as a	un	iit in t	he he	art ?						

- A. Intercalated disc
- B. Gap junction
- C. Desmosome
- D. Intercellular bridges

Answer: B



15. As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics

A. will increase

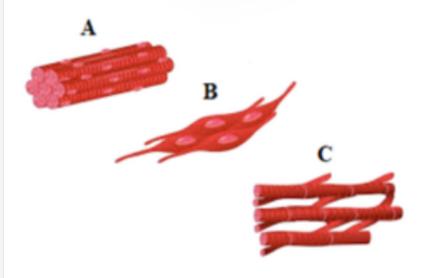
- B. will decrease
- C. remains the same
- D. may increase or decrease

Answer: B



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16. Identify the type of muscle shown in the picture given below .



A. Skeletal muscle, striated muscle and cardiac muscle

- B. Striated muscle, skeletal muscle and cardiac muscle
- C. Skeletal muscle, smooth muscle and cardiac muscle
- D. Cardiac muscle, smooth muscle and skeletal muscle

Answer: C



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17. A micronutrient is one which

- A. More important than any major elements and are boron (B), chlorine (Cl). Copper (Cu), iron (Fe), manganese (Mn), magnesium (Mg), molybdenum (Mo), and zinc (Zn).
- B. Less important than major elements and are boron (B), chlorine (Cl). Copper (Cu), iron (Fe), manganese (Mn),

magnesium (Mg) , molybdenum (Mo) , and zinc (Zn) and phosphorous.

C. Needed in small quantity but is as important as a major element and are boron (B), chlorine (Cl) , copper (Cu) , iron (Fe) , manganese (Mn) , molybdenum (Mo) , and zinc (Zn)

D. Found small quantities in the soil and are boron (B), chlorine (Cl), copper (Cu), iron (Fe), magnesium (Mg), molybdenum (Mo), and zinc (Zn) and Calcium (Ca)

Answer: C



18. What are the two key concepts of Darwinism?

A. Natural selection and branching descent

- B. Branching descent and competition
- C. Mimicry and natural selection
- D. Variation and competition

Answer: A



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- 19. Term " virion " is used for
 - A. mycoplasma colony
 - B. single virus
 - C. group of viruses
 - D. cancerous cells

Answer: B



20. The basic components of a PCR Reaction includes

A. amplifier , primers , dNTP's , Taq polymerase and a buffer

B. amplifier , template DNA , primers , dNTP's and a buffer

C. template DNA , primers , Taq polymerase , amplifier and a

 $\ensuremath{\mathsf{D}}.$ template $\ensuremath{\mathsf{DNA}}$, primers, dNTP's Taq polymerase and a buffer

Answer: D

buffer



21. Which of the following is not example of adaptive radiation?

A. Darwin finches

C. Cichlid fishes
D. All of the above
Answer: D
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22. Kangaroo and desert rat that live in conditions of water
scarcity are capable of meeting all their water requirements by
A. Internal fat oxidation
B. Ability to concentrate its urine
C. Are insensitive to hear
D. Both A and B

B. Australian marsupials



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23. Which of the following human was first to start cave paintings and domestication of animals ?

- A. Homo erectus
- B. Australopithecus
- C. Cro magnon man
- D. Heidelberg man

Answer: C



24. Soil erosion and desertification is due to human activity like
A. Overcultivation
B. Unrestricted grazing
C. Increased urbanisation
D. All of the above
Answer: D
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25. Which antibody titer rises during allergy?
A. Immunoglobulin A

B. Immunoglobulin G

C. Immunoglobulin M

D. Immunoglobulin E

Answer: D



- **26.** Select the correct statement among the following .
- I. Euryhaline can tolerate a wide rang of salinity
- II. The productivity and distribution of plants are heavily dependent on water
- III. Many freshwater animals cannot live for long in seawater but sea animals can live in freshwater for a long time because of osmotic balance
 - A. All are correct
 - B. All are false
 - C. Only III is incorrect

D. I	and	II are	incorrect

Answer: C



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27. The name of Mary Mallon was related with

A. Typhoid

B. AIDS

C. Herpes

D. Ascariasis

Answer: A



- 28. The secondary productivity means
 - A. Rate of increase in the biomass of autotrophs
 - B. Rate of increase in biomass of heterotrophs
 - C. The rate at which the organic molecules are formed in an autotrophs
 - D. The rate at which the organic molecules are used in an autotrophs

Answer: B



- 29. Most animals that live in deep oceanic waters are:
 - A. Primary consumers

- B. Secondary consumers
- C. Tertiary consumers
- D. Detrivores



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30. During an autoimmune disorder

- A. the immune system has the ability to differentiate between foreign antigens from self antigens .
- B. the immune system loses the ability to differentiate between foreign antigens from self antigens
- C. the immune system attacks self cells and causes damage to

them.

D. Both	(B) and	(C)
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31. An inverted pyramid of May be observed in Communities .

- A. Energy, grassland
- B. Energy , forest
- C. Biomass, marine
- D. Biomass, forest

Answer: C



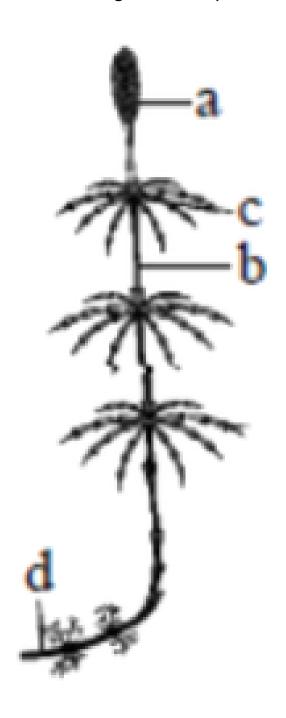
32. When a viral DNA is incorporated inside the host DNA,it is	>
known as:	
A. Phycophages	
B. Cyanophages	
C. prophage	
D. Vegphage	
Answer: C	
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33. Which of the following contraceptive pills has been	ì
manufactured by CDRI Lucknow ?	
A. Saheli	

- B. Copper T
- C. Norplant
- D. All of the above

Answer: A



 ${\bf 34.}$ In the below diagram , identify the a,b,c and d



- A. a Strobilus, b Node, c Internode, d Rhizoids
- B. a Cone, b Stem, c Leaves, d Rhizods
- C. a Strobilus, b Leaves, c Stem, d Rhizome
- D. a Strobilus, b Internode, c Node, d Rhizome



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35. In Assisted Reproductive Technology , the method in which a sperm is directly injected into the ovum is called :

- A. GIFT
- B. IUI
- C. ICSI

Answer: C



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- 36. A free living, anaerobic, nitrogen fixing bacterium is
 - A. Rhizobium
 - **B. Streptococcus**
 - C. Azotobacter
 - D. Clostridium

Answer: D



37. Which of the following secretes the hormone responsible for relaxing pubic symphysis during the childbirth ?

- A. Pineal gland
- B. Macula
- C. Corpus albicans
- D. Placenta

Answer: D



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38. Chemosynthetic autotrophic bacteria produce ATP by

- A. oxidising various organic substances.
- B. oxidising various inorganic substances .

C. reducing various inorganic substances.

D. recycling various organic substances.

Answer: B



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39. Which of the following structures is responsible for the release of sperm in the lumen of seminiferous tubules ?

- A. Sertoli cells
- B. Spermatogonia
- C. Leydig cell
- D. Oogonial cells

Answer: A



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0. The chlorophyll which is common between phaeophyceae and
viatoms, but absent in Rhodophyceae is
A. Chlorophyll a
B. Chlorophyll c
C. Chlorophyll b
D. Chlorophyll e
D. Ciliotophyli e
nswer: B



41. Mark the correct statement any Selaginella .

A. Macrophylls are a characteristic feature of Selaginella.

- B. The spores germinate to give rise free living, multicellular thalloid gametophytes.
- C. The sporophytes bear sporangia, which produce spores mitotically in the spore mother cells.
- D. It is a homosporous plant , meaning it can produce only one type of spores.

Answer: B



- **42.** Arrange the formation of the following cells in the ovary the sequential order :
- i) Ovum
- ii) Primary follicle

iii) Primary oocytes iv) Graffian follicle A. ii), i), iv), iii) B. iii), ii), i), iv) C. iii), ii), iv), i) D. i), ii), iii), iv) **Answer: C Watch Video Solution** 43. Unbranched stems and pinnate leaves are characteristic features of A. Pinus B. Sequoia

- C. Cycas
- D. Cedrus

Answer: C



- **44.** Near the tips of grass blades there is water loss in the form of liquid droplet around special openings of veins. This occurs due to
 - A. negative root pressure due to water accumulation in vein endings .
 - B. Positive root pressure due to water accumulation in vein endings.
 - C. Positive root pressure due to release of water in vein endings.

D. negative root pressure due to release of water in vein endings.

Answer: B



45. Which of the following methods are used to carry out controlled breeding experiments?

A. Cross - breeding

B. Artificial insemination

C. Interspecific hybridization

D. Out - crossing

Answer: B



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46. One of the most resistant biological materials known is

A. hemicellulose

B. lignin

C. sporopollenin

D. lignocelluloses

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47. Hilsa and mackerel are varieties of

A. Edible marine fish

B. Edible freshwater fish

Answer: C

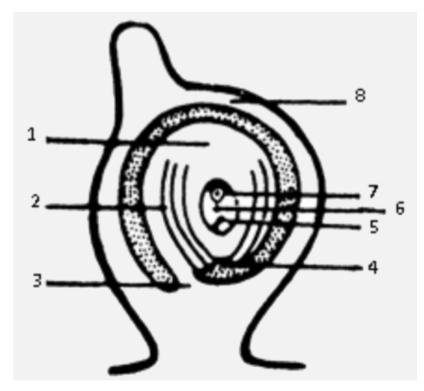
- C. Inedible marine fish
- D. Inedible cartilaginous fish

Answer: A



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48. The diagram below shows a fertilised ovule and carpel .



Mark the correct set of numbers which represent the structures

that will become:

- (i) The future embryo
- (ii) The future testa
- (iii) The future micropyle region

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A. \frac{i}{5} \frac{ii}{3} \frac{iii}{7}
B. \frac{i}{7} \frac{ii}{8} \frac{iii}{4}
C. \frac{i}{6} \frac{ii}{3} \frac{iii}{7}
D. \frac{i}{5} \frac{ii}{2} \frac{iii}{4}
```

Answer: D



49. Given below is the diagrammatic sketch of a certain type of connective tissue, identify are parts labelled A, B, C and D. and

select the right option about them



A. A - Macrophage , B - Fibroblast , C - Collagen fibers , D - Mast cell

B. A - Mast cell , B - Collagen fibers , C - Fibroblast , D - Macrophage

C. A - Macrophage , B - Collagen fibers , C - Fibroblast , D - Mast cell

D. A - Mast cell , B - Collagen fibers , C - Fibroblast , D - Macrophage

Answer: A



50. If the endosperm of an angiosperm has 24 chromosomes, what would be the number of chromosomes in the megaspore mother cell of the same plant ?

A. 8

B. 16

C. 24

D. 32

Answer: B



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51. The cardiac pacemaker in a patient fails to function normally. The doctors find that an artifical pacemaker is to be grafted in him. It is likely that it will be grafted at the site of $\,-\,$

- A. Atriventricular bundle
- B. Purkinje system
- C. Sinuatrial node
- D. Atrioventricular node

Answer: C



52. Match the following list of microbes and their importance :

	Column I		Column II			
	Lactobacillus	(i)	Production of			
Α			genetically-engineered			
			clot busters			
В	Monascus	(ii)	Production of citric acid			
_	purpureus	(11)				
	Streptococcus	(iii)	Conversion of milk into			
			curd			
	Aspergillus niger	(iv)	Production of blood-			
D			cholesterol lowering			
			agents			

A. A - iv, B - iii, C - ii , D - i

B. A - iv, B - ii, C - i , D - iii

C. A - iii, B - i, C - iv, D - ii

D. A - iii, B - iv, C - i , D - ii

Answer: D

....

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- 53. The genus Nucleopolyhedroviruses are
 - A. effective against disease causing pathogens .
 - B. effective against rodents
 - C. broad spectrum insecticides.
 - D. effective against insects and other arthropods.

Answer: D



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54. If due to some injury the chordae tendineae of the tricuspid valve of the human heart is partially non-functional, what will be the immediate effect ?

- A. The 'Pacemaker' will stop working .
- B. The flow of blood into the aorta will be slowed down.
- C. The blood will tend to flow back into the left atrium.
- D. The flow of blood into the pulmonary artery will be be reduced.

Answer: D

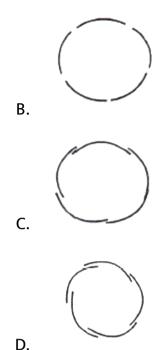


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55. Activation of petals in the flower of cotton is correctly shown in



A.



Answer: D



56. The underground stem of which plant is modified to store and also acts as an organ of perennation to tide over unfavorable conditions for growth ?

A. Gourds B. Bougainvillea C. Colocasia D. Opuntia **Answer: C Watch Video Solution** 57. Why of the following hormones plays a very important role in the regulation of diurnal rhythm of our body? A. Melatonin B. ADH C. Gonadotropin D. Androgen

Watch Video Solution 58. Parietal placentation is observed in A. Dianthus B. Pisum C. Primrose D. Argemone **Answer: D Watch Video Solution**

59. Which of the following is a hyperglycemia hormone?

Answer: A

- A. Glucagon
- B. Insulin
- C. Aldosterone
- D. Androgen

Answer: A



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enzyme product complex.

- **60.** The first step of an enzyme catalysed reaction is :
 - A. The enzyme breaks the chemical bond of the substrate .
 - B. The enzyme releases the product of the reaction.
 - C. The substrate binds to the active site of the enzyme.
 - D. The binding site reacts with the substrate forming the

Answer: C



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- 61. Which of the following is related to the pituitary gland?
 - A. It is located in a depression created by bony cavity.
 - B. The anterior pituitary is also called adenohypopysis.
 - C. Pars intermedia secretes only one hormone.
 - D. All of the above

Answer: D



62. Which	of the	following	amino	acid	is	not	optically	active	and
has achira	l carboı	n ?							

- A. Alanine
- B. Serine
- C. Glycine
- D. Lysine

Answer: C



63. Vitamin B_{12} deficiency in the body cause megakaryocytic anemia. The secretion of which of the following cells is required for the absorption of B_{12} ?

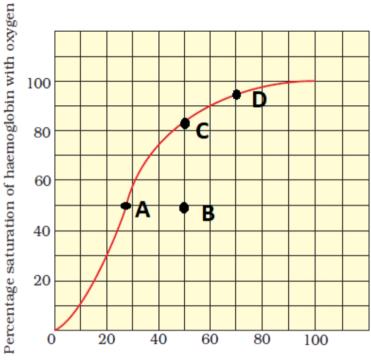
A. Oxyntic cells					
B. Neck cells					
C. Chief cells					
D. Crypts of Lieberkuhn					
Answer: A					
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54. Cellulose, the most important constituent of plant cell wall is					
made up of					
A. Branched - chain of glucose molecules linked by $eta-1,4$					
glycosidic bonds in a straight chain and $lpha-1$, 6 glycosidic					
bond					

- B. Unbranched chain of glucose molecules linked by eta-1,4 glycosidic bond
- C. Branched chain of glucose molecules linked by lpha-1,6 glycosidic bonds at the site of branching
- D. Unbranched chain of glucose molecules linked by lpha-1,4 glycosidic bond

Answer: B



65. Which of the following point on the oxygen dissociation curve represent p_{50} of HbO_2 in the graph give below?



Partial pressure of oxygen (mm Hg)

A. A

B.B

C. C

D. D

Answer: A



66. Frameshift insertion or deletion mutations proves that

- A. A codon is triplet
- B. A codon is read in a contiguous manner
- C. The genetic code is present on mRNA
- D. Both (A) and (B)

Answer: D



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67. 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. G34% , A24.5% , T24.5%
- B. $G17\,\%$, $A16.5\,\%$, $T32.5\,\%$
- C. G17%, A33%, T33%
- D. G8.5~% , A50~% , T24.5~%

Answer: C



- 68. Read the following statement (A D).
- (A) The movement of air into and out of the lungs is carried out by creating a pressure gradient between the lungs and atmosphere.
- (B) Inspiration can occur if the pressure within the lungs is more than the atmospheric pressure.
- (C) Expiration takes place when the intrapulmonary pressure is lesser than the atmospheric pressure.

(D) The diaphragm and a specialized set of intercostal muscles in between the ribs help in the generation of such pressure gradients for breathing.

How many of the following statements are correct?

A. Four

B. Three

C. Two

D. One

Answer: C



69. Lac operon consists of

A. One inhibitor, one operator, 2 structural gene

- B. One inhibitor , one operator , 5 structural gene
- C. One inhibitor, one operator, 3 structural gene
- D. One inhibitor, one operator, 1 structural gene

Answer: C



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70. How many plants in the given below are pollinated by water?

Vallisneria, Zostera, water hyacinth, water lily, coconut, yucca,

Hydria , Ficus

- **A.** 3
- B. 5
- C. 4
- D. 6

Answer: A



71. The efficiency of the cell to take up rDNA is increased by

- A. Monovalent cation
- B. Divalent cation
- C. Monovalent anion
- D. Divalent anion

Answer: B



- A. The process of coating of DNA with micropellets of gold and tungstenB. The process of precipitation of DNA using a suitable reagent
- C. The process of insertion of DNA
- D. The process of cutting out and extracting bands of DNA from gel.

Answer: D



73. Restriction endonuclease HindII acts on a palindromic specific sequence ofbase pair.

- A. 2
- B. 4

C. 6

D. 8

Answer: C



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74. Turner syndrome is an example of

A. Structural chromosomal aberration - Due to non disjunction

B. Numerical chromosomal aberration - Due to disjunction

C. Aneuploidy - Due to non - disjunction

D. Both (B) and (C)

Answer: C





75. Holandric traits are

A. Y chromosome linked traits

B. X chromosome linked traits

C. X and Y chromosome linked traits

D. Autosomal linked trait.

Answer: A



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76. Skin colour in humans is an example of

A. Polygenic inheritance

B. Pleiotropy

- C. Qualitative traits
- D. More than one option is correct.

Answer: A



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77. Photosynthesis is

- A. an oxidative, an exergonic, and a catabolic process.
- B. a redox reaction , an endergonic , and an anabolic process.
- C. a reductive, an exergonic, and an anabolic process
- D. a reductive, an endergonic, and an catabolic process.

Answer: B



78. During photophosphorylation in accordance with lysis of water the following reaction takes place:

$$H_2O + H_3PO_4 + ADP + NADP \stackrel{ ext{light}}{\longrightarrow} NADPH_2 + ATP + \ 'X'.$$

where X is

A.
$$\frac{1}{2}O_2$$

B.
$$H_2O$$

$$\mathsf{C}.\,O_2$$

D.
$$H^+$$

Answer: A



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79. Two linked genes and b show 20% recombination the individuals of a hybrid cross between ++/++ X ab/ab shall show

gametes: A. + + 80: ab: 20B. + + 50: ab: 50C. + +40:ab40:a10:+b10D. + +30:ab30:a20: +b20**Answer: C Watch Video Solution** 80. Vegetative propagation in Pistia occurs by A. Stolon B. Offset C. Runner D. Sucker

Answer: B



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- **81.** Which of the following statement about the hotspot is incorrect?
 - A. Total area covered by hotspots is less than 2% of worlds
 - B. Total hotspots in world are 34
 - C. Hotspots had mega diversity and high degree of endemism
 - D. India has four hotspots

Answer: B



82. Which of the following is not included in "Evil Quartet", with respect to the cause of biodiversity loss?

- A. Co evolution
- B. Over exploitation
- C. Alien species invasion
- D. Habitat loss and fragmentation

Answer: A



- 83. Which of the following option represent extinct species?
 - A. Dodo (Mauritius), Quagga (Africa)
 - B. Thylacine (Australia), Stellar sea cow (Russia)

- C. Three subspecies of Tiger (Bali, Javan and Caspian)
- D. All of the above

Answer: D



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84. In 1983, Eli lilly, an American company prepared two DNA sequences corresponding to A and B chains of human insulin and introduced them in plasmids of ..A.. to produce insulin chains. Chains A and B were produced separately extracted and combined by creating ...B... to from human insulin.

Choose the option which correctly fills the blank marked as A and

A. $\frac{a}{\text{E. coli}} \frac{b}{\text{Hydrogen bond}}$

B in the given paragraph

B. E. coli Phospodiester bond

C. $\frac{a}{\text{Ti plasmid}}$ $\frac{b}{\text{Disulphide bonds}}$ $\frac{a}{b}$

D. $\frac{a}{\text{E. coli}} \frac{b}{\text{Disulphide bonds}}$

Answer: D



85. Which of the following is correct about ZW - ZZ type of sex determination in birds?

A. Males are heterogametic

B. Females are heterogametic

C. Females are homogametic

D. Both males and females are homogametic

Answer: B



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86. Consider the following statements w.r.t transcription and select the right choice

- (i) The promoted is said to located towards the 5' end of the coding strand.
- (ii) The promoted is an RAN sequence that provides a binding site for RNA polymerase.
- (iii) The terminator is located towards the 3' end of the coding strand.
- (iv) The strand that has polarity $3^\prime \to 5^\prime$ acts as a template strand .

A. I & iii are incorrect

B. I & iii are correct

C. Only ii is incorrect

D. Only ii is correct

Answer: C



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87. How many different types of gametes could be produced through the independent assortment by an individual with the genotype AaBBCcDdee?

- A. 8
- B. 4
- C. 2
- D. 1

Answer: A



88. Respiratory quotient (R.Q.) is defined as the ratio of a volume of CO_2 evolved to the volume of O_2 taken in during the respiration process. Value of R.Q. depends on the nature of respiratory substrate and to the extent to which this substance is broken down into simpler products. Which of the following situation will give us the R.Q. value as infinity when alcohol is produced?

- A. Fats used as substrate under aerobic conditions .
- B. Organic acid is used as a substrate under aerobic conditions.
- C. Carbohydrate substrate used under anaerobic conditions.
- D. Any type to substrate used under aerobic conditions.

Answer: C



89. EMP can produce a total of how many ATP under aerobic condition.

A. 6

B. 8

C. 24

D. 38 ATP

Answer: B



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90. Identify phases labeled as A, B, and C in a given sigmoidal growth curve.



 $A = \begin{bmatrix} A & & & B & C \\ Stationary & log & Lag \\ B & B & & C \\ Lag & Stationary & log \\ C & A & B & C \\ log & Lag & Stationary \\ D & A & B & C \\ \end{bmatrix}$

Answer: D

