

# **BIOLOGY**

# **BOOKS - NTA MOCK TESTS**

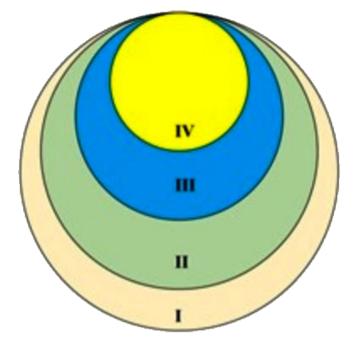
## **NTA NEET SET 56**

# Biology

- **1.** Select the option regarding the tissues that are grouped under the ground tissues?
  - A. all tissues internal to endodermis
  - B. all tissues external to endodermis
  - C. all tissues external epidermis and vascular bundles
  - D. epidermis and cortex

**Answer: C** 

2. Each of these circles represents an animal group. Which one of these options has animal groups which can be depicted by this diagram?



Γ	1	II	III	lv	IV
i	Animals with three germ lavers	Animals having bilateral symmetry	Animals with		Animals with a chitinous exoskeleton.
ii	Animals with	with	rasping organs called	Animals with three pairs of legs	
ii	extracellular	Animals with a chitinous exoskeleton	three pairs of legs and two pairs of	Anim Is with book gills as their respirator organs	book gills as
iv	during	with well-	Animals with 12 pairs of cranial nerves	temperature	

A. i

B. ii

C. iii

D. iv

**Answer: D** 



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**3.** In mollusks of New York state, which of these experiences gives you a value between 0.1 to 0.2?

( S = log of species richness, A = log of Area, C = log of Y- intercept in the species richness area curve)

A. 
$$\frac{S-C}{A}$$

B. 
$$\frac{S-A}{C}$$

c. 
$$\frac{C-A}{S}$$

D. 
$$\frac{A-S}{C}$$

**Answer: A** 



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4. The interactions of ligands with protein,

A. usually result in the activation of the proteins

- B. are relatively rare in biological systems.
- C. are usually irreversible
- D. are usually transient

#### **Answer: D**



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5. Which of the following molecule represent the given structure?

A. Monosaccharide that is present in animal starch

- B. Monosaccharide that is present in inulin
- C. Monosaccharide that is present in the genetic material of tobacco
- D. Monosaccharide that is present in the genetic material of lambda bacteriophage

#### **Answer: C**



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6. Which combination is correct for the pairing of column I and II?

	Column-I		Column-II
(a)	lpha -1- antitrypsin	(i)	Pig
(b)	Xenograft	(ii)	Emphysema
(c)	Rosie milk	(iii)	Human protein enriched
(d)	Toxicity	(iv)	More sensitive transgenic
(4)	testing	(17)	animals

#### **Answer: B**



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**7.** The correct arrangements of cardiac valves from the right side to the left sides is

A. bicuspid valve - pulmonary semilunar valve - aortic semilunar valve - tricuspid valve

B. tricuspid valve - aortic semilunar valve pulmonary semilunar valvebicuspid valve

C. tricuspid have - bicuspid value - pulmonary semilunar value - aortic semilunar D. tricuspid valve - pulmonary semilunar valve - aortic semilunar valve bicuspid valve Answer: D **Watch Video Solution** 



8. Structure common between earthworm and cockroach is

Or Which one feature is common to leech cockroach and scorpion

A. Nephridia

B. Cephalization

C. Ventral nerve chord

D. Antennae

Answer: C

- 9. Which of these pairs are incorrectly clubbed together?
  - A. Cells in adult animals which do not divide Heart cells
  - B. Equational division Mitosis
  - C. Disc shaped structures at The surface of centromere kinetochores
  - D. Initiation of assembly of mitotic spindle Mitotic metaphase

#### Answer: D



- **10.** Which type of primer is used the genetic engineering tool -polymerase chain Reaction?
  - A. Complementary to 5 ' end of DNA and template
  - B. Complementary to 3 ' end of DNA and template

- C. Complementary to both 3' and 5' end of DNA template
- D. Complementary to each other

#### **Answer: B**



- **11.** The nucleus is a significant organelle found in the cell. Read the following statements about the nucleus and select the option that correctly determines the number of false statements.
- (i) The nuclear envelope consists of two parallel membranes having space between them called pericentriolar space.
- (ii) The outer membrane of the nucleus usually remains continuous with the Golgi apparatus.
- (iii) The nuclear matrix or the nucleoplasm contains nucleolus and chromatin.
- (iv) Larger and more numerous nucleoli are present in cells actively carrying out lipid synthesis

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L	Watch Video Solution				
1:	2. W	hich of thes	se glands are co	rrectly matched with	their embryonic
	12. Which of these glands are correctly matched with their embryonic				
0	origin and chemical nature of their hormones?				
			Germ layer of	Chemical nature of	
		Gland	formation	hormones	
	(i)	Adrenal cortex	ectoderm	steroids	
	(ii)	Adrenal medulla	mesoderm	catecholamines	
	(iii)	Pancreas	mesoderm	polypeptides	
	(iv)	Parathyroid Gland	endoderm	polypeptides	

A. One

B. Two

C. Three

D. Four

B. (ii)
C. (iii)
D. (iv)
Answer: D
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13. The alimentary canal of a deceased individual was cut transversely for
examination of the arrangement of layers from outside to inside. Select
the correct sequence of arrangement for the layers examined.
A. Serosa $ ightarrow$ Longitudinal muscles $ ightarrow$ Circular muscles $ ightarrow$ Mucosa
→ Submucosa
B. Mucosa $ ightarrow$ Submucosa $ ightarrow$ Circular muscles $ ightarrow$ Longitudinal
muscle $ ightarrow$ Serosa

A. (i)

C. Serosa ightarrow Longitudinal muscles ightarrow Circular muscles ightarrow

Submucosa ightarrow Mucosa

D. Serosa ightarrow Longitudinal muscles ightarrow Oblique muscles ightarrow Circular muscles ightarrow Submucosa ightarrow Mucosa

#### Answer: C



- **14.** Denny ate spinach, salad and mutton curry for lunch. At which of the following trophic levels did Danny function in this food chain?
- (i) Producer
- (ii) Primary consumer
- (iii) Secondary consumer
- (iv) Tertiary consumer
  - A. i and ii
  - B. ii only

C. ii and iii

D. iv only

#### **Answer: C**



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**15.** Determine the sequence for line of descent in human evolution that is most accepted one.

A. Australopithecus ightarrow Homo habilis ightarrow Homo sapiens ightarrow Home erectus

B. Ramapithecus ightarrow Neanderthal Man ightarrow Cro Magnon Man ightarrow

 $\hbox{Homo erectus} \ \to \ \hbox{Homo sapiens}$ 

C. Dryopithecus ightarrow Australopithecus ightarrow Homo habilis ightarrow Home erectus ightarrow Home sapiens

D. Dryopithecus  $\;
ightarrow\;$  Home erectus  $\;
ightarrow\;$  Java Man  $\;
ightarrow\;$  Home habilis

ightarrow Australopithecus

#### **Answer: C**



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**16.** If the solubility of three nitrogenous wastes is arranged in the ascending order  $S_1 < S_2 < S_3$  and their toxicity levels also arranged in ascending order  $T_1 < T_2 < T_3$  identify the correct option.

Ammonia Urea Uric acidi  $S_3T_1$   $S_2T_3$   $S_1T_2$  ii  $S_2T_2$   $S_1T_1$   $S_3T_3$   $\cdots$   $S_nT_n$   $S_nT_n$ 

 $iii \quad S_1T_3 \qquad \qquad S_2T_2 \quad S_3T_3 \ iv \quad S_3T_3 \qquad \qquad S_2T_2 \quad S_1T_1$ 

A. i

B. ii

C. iii

D. iv

# Answer: D



**17.** The saliva in the mouth and the tears from the eyes will be included under which category of innate immunity?

- A. Physiological barrier
- B. Physical barrier
- C. Cytokine barrier
- D. Cellular barrier

#### Answer: A



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**18.** This secondary pollutant has caused significant damage to the beauty of historical monuments like the Taj Mahal and Red fort. Identify the

correct match of the responsible pollutant and its characteristics feature.

A. Acid rain - ratio of  $H_2SO_4 \ \mathrm{and} \ HNO_3$  is 3 : 7

B. Photochemical Smog -  $PAN+O_3+\;$  Nitrogen oxides

C. Acid rain - pH of  $\,<5.6\,$ 

D. Sulphur smog - formed from vapour of  $H_2SO_4$ 

#### **Answer: C**



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**19.** Which of the components of human semen are correctly matched with the glands that secrete it ?

- (i) citric acid prostate gland
- (ii) Fibrinogen Seminal vesicle
- (iii) prostaglandins prostate gland
- (iv) Fructose seminal vesicle

A. i, ii, iii and iv

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

#### **Answer: D**



- **20.** The thick filament of a myofibril is part of the muscle fibre. Select the incorrect statement regarding it.
  - A. Each thick filament is a polymerized protein of monomeric meromyosins.
  - B. Each meromyosin has two important parts, a globular head with a short arm and a tail.
  - C. The heavy meromyosin components from the cross arms of thick filaments.

D. Short arms of the light meromyosin has an active ATPase enzyme activity.

#### **Answer: D**



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**21.** Which combination from the option fill up the blank space a, b, c and d correctly in the table below?

	Type of	_	Commercial
	microbe	Scientific Name	Product
(i)	Bacterium	a	Clot buster enzyme
(ii)	b	Aspergillus niger	Citric acid
(iii)	Fungus	Monascus	C
(111)	rungus	purpureus	
(iv)	Bacterium	d	Butyric acid

A. (a) (b) (c) (d) Lactobacillus Fungus Strain Penicillium roquefortii

B. (a) (b) (c) (d) Streptococcus Fungus Strain Clostridium butylicum

Lactobacillus Fungus Strain Penicillium roquefortii

Answer: B

D.

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# 22. What is the correct fate of ammonium ions in plants?

A. It undergoes transamination with alpha ketogutaric acid to form glumate acid which further undergoes reductive amination to form other amino acids

B. It undergoes reductive amination with alpha ketoglutaric acid to glumatine which further undergoes transamination to form other amino acids .

C. It undergoes transamination with alpha ketogutaric acid to glutamine which further undergoes reductive amination to form other amino acids

D. It undergoes reductive amination with alpha ketoglutaric acid to glumate which further undergoes transamination to form other amino acids .

#### **Answer: D**



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**23.** Following are given sequences of mRNA Identify the one that will not undergo complete translation.

A. 5 ' AUG UUC AGC UCG UGA 3'

B. 5' AUG CCA UAC GAC UAG 3'

C. 5 ' AUG UUA CUC GCG UAA 3'

D. 5' AUG AAC UAA CCA CUC 3'

#### Answer: D



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- 24. Which of these properties are seen in Hibiscus rosa sinensis?
- (i) Leaves with alternate phyllotaxy
- (ii) Polycarpellary syncarpous inferior ovary
- (iii) Twisted aestivation in petals
- (iv) Basal placentation of ovules
  - A. i and ii
  - B. iii and iv
  - C. i and iii
  - D. ii and iv

#### **Answer: C**



**25.** First action spectrum of photosynthesis based on study of Cladophora was given by -

A. Jan ingenuous

B. Joseph Priestley

C. Von Sachs

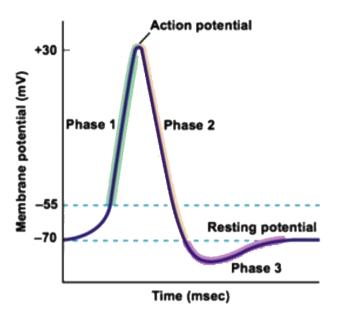
D. Engelmann

#### **Answer: D**



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**26.** Observe the action potential and state the correct events that occur in Phase I and Phase II .



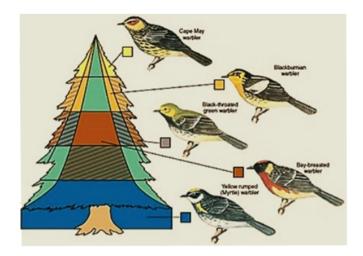
- A. Phase I: Sodium channels open causing movement of sodium ions from the extracellular fluid to the axoplasm . Phase II: Potassium channels open causing movement of potassium ions from the extracellular fluid to the axoplasm.
- B. Phase I: Sodium channels open causing movement of sodium ions from the extracellular fluid to the axoplasm . Phase II: Potassium channels open causing movement of potassium ions from the axoplasm to the extracellular fluid.

C. Phase I: Sodium channels open causing movement of sodium ions from the axoplasm to the extracellular fluid. Phase II: Potassium channels open causing movement of potassium ions from the extracellular fluid to the axoplasm.

D. Phase I: Sodium channels open causing movement of sodium ions from the axoplasm to the extracellular fluid. Phase II: Potassium channels open causing movement of potassium ions from the axoplasm to the extracellular fluid.

#### **Answer: B**





27.

Observe the picture and state the phenomenon that can be explained by this

- A. Competitive exclusion principle
- B. Competitive release
- C. Resource partitioning
- D. Commensalism

**Answer: C** 



**28.** During muscle contraction , hydrolysis of ATP results in a change in the .

A. structure of the myofibrils

B. conformation of myosin

C. conformation of actin

D. structure of the sarcoplasmic reticulum

#### **Answer: B**



29. Determine the statement that is not related to sporopollenin.

A. The hard outer layer of pollen grain is called exine which is made up of sporopollenin.

B. It is one of the most resistant organic material which is produced by endothecium

- C. No enzyme is known yet which degrades sporopollenin.
- D. It can withstand high temperature and strong and alkali.

#### **Answer: B**



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- **30.** Which of the following terms have been grouped correctly?
  - A. Sclerenchymatous hypodermis : dicot stem
  - B. Collenchymatous hypodermis : monocot stem
  - C. Starch sheath: Pericycle of dicot stem
  - D. Starch sheath: Endodermis of dicot stem

### Answer: D



**31.** Each one of the following options has a rule regarding a certain animal group and an exception from that group written in brackets . which one is incorrect?

A. Reptiles have an incompletely four-chambered heart. (Crocodilus )

B. Amphibians have two pairs of limbs .( Icthyophis)

C. Sponges are found in marine water .(spongilla)

D. Roundworms are monoecious. (Ascaris )

#### **Answer: D**



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**32.** P, Q R and S four places in the world as given in the following map.

Arrange these places in increasing order of their biodiversity.



$$\mathrm{A.}\,P < Q < R < S$$

$$\mathsf{B.}\, Q < S < P < R$$

$$\mathsf{C.}\, Q < S < R < P$$

$$\operatorname{D.} Q < R < S < P$$

# **Answer: C**



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**33.** Select the combination that correctly marches the fungi to respective class.

Column I (Fungi)			Column II (Class)	
		Column II (Class)		
	The fungus used in the			
(1)	production of the	(i)	Deuteromycetes	
	hallucinogenic drug LSD			
	The fungus which affects			
(2)	crop plants and cereals	(ii)	Ascomycetes	
	causing powdery smuts			
(3)	The fungus causing white	/iii\	Basidiomycetes	
(3)	rust in mustard plant	(''')	Basidiomycetes	
(1)	The fungus used in the production of Cyclosporin	(iv)	Dhycomycotos	
(4)	production of Cyclosporin	(IV)	Phycomycetes	

- (1) (2)(3) (4)ii
- (I)iiiiiv(II)iiiiiivi
- (III)iiiiiiiv
- (IV)iiiiiivi
  - A. (I)
  - B. (II)
  - C. (III)
  - D. (IV)

# **Answer: B**



**34.** Match the proteins with their appropriate properties .

	Protein		Property
(1)	Collagen	(i)	Hormone
(2)	Trypsin	(ii)	Enzyme
(3)	Insulin	(iii)	Fight Infectious agent
$\overline{(4)}$	Receptor	(iv)	Enable glucose transport into cells
(5)	GLUT-4		Sensory reception (smell, taste
(0)	GLU 1-4	(v)	hormone)
(6)	Antibody	(vi)	Intercellular ground substance

#### **Answer: B**



**35.** The modern day washing powder have some biological content . Which of the following will be mostly added to the powder as biological content?

A. DNA ligase

B. lactase

C. Pectinase

D. lipase

#### **Answer: D**



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Rh system taken together ) is correct.

**36.** State which of these statements about blood group (ABO system and

A. The blood group having all the possible antigens present in these

two systems is the universal recipient

- B. The blood group considered as the universal donor is also the commonest Blood group in humans
- C. The blood group considered as the universal recipient is also the rarest blood group in humans
- D. The blood group having no antibodies against any of the antigens in these two system is the universal donor

#### Answer: A



bronchioles

- 37. The conducting part of the respiratory system is
  - A. The part starting with trachea up to the terminal bronchioles
  - B. The part starting with external nostrils up to the terminal

C. The part starting with the initial bronchioles up to the terminal

bronchioles

D. The part starting with the external nostrils up to the respiratory bronchioles

#### **Answer: B**



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**38.** Select the correct even from below that is most likely to occur during the three subphases of the interphase of the mitotic cell cycle .

A. During  $G_1$  phase , the cell is metabolically active and replicates its DNA .

- B. During S phase duplication of centrioles takes place.
- C. The number of chromosomes becomes double in the synthesis phase .

D. Replication of DNA starts during the  $G_2$  phase and proteins are synthesized in order to prepare the cell for mitosis.

### **Answer: B**



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**39.** In bacterial cells ,the outermost layer of the cell envelope can either be a

A. Cell wall or plasma membrane

B. Lamellae or slime layer

C. Slime layer or capsule

D. Plasma membrane or lamellae

### **Answer: C**



<b>40.</b> Select the symptom that is not shown in Grave's disease.
A. Protrusion of the eyeballs
B. Enlargement of thyroid gland
C. Weight-gain
D. Increased body temperature
Answer: C
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41. Which of the following condition Will inhibit decomposition ?
41. Which of the following condition Will inhibit decomposition?  A. Aerobic condition
A. Aerobic condition
A. Aerobic condition  B. High temperature

### Answer: D



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- **42.** Which of the following is not exhibiting convergent evolution?
  - A. Wolf Numbat
  - B. Lemur spotted cuscus
  - C. Bobcat Tasmanian tiger cat
  - D. Mole Marsupial mole

### Answer: A



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**43.** Manu, who is a worker in the dump yard, started experiencing nausea, vomiting, headache and loss of appetite for the past few days, carefully history and examination, his doctor came to the conclusion that he

suffers from nickel poisoning. Which is the most likely cause of this poisoning?. A. Plastic waste B. Leather waste C. F-waste D. Bio-medical waste **Answer: C Watch Video Solution** 

**44.** Which of these options doesn't have a pair of diseases caused by organisms of the same genus ?

A. Tuberculosis and Leprosy

B. Tetanus and Food poisoning

C. African sleeping sickness and chaga's disease

D. Anthrax and Plague

### **Answer: D**



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- 45. Which of these statements about decidua is false?
  - A. Decidua cells are enlarged, vacuolated endometrial cells filled with glycogen and lipids.
  - B. Decidua parietalis refers to the part of the decidua which gives rise to maternal part
  - C. Decidua capsularis refers to the part of the decidua which overlies
    - the embryo and separates it from the uterine cavity.
  - D. These cells are called decidua decidua because they are shed off during parturition .

### Answer: B

**46.** Following are given differences between red muscle fibres and white muscle fibres. Which of them is / are incorrect ?

	Characteristic	Red	White
		fibres	fibres
(a)	Myoglobin content	High	Low
(b)	Sarcoplasmic reticulum	High	Low
	content	liigii	LOW
(c)	Number of mitochondria	High	Low
(d)	Type of respiration	Aerobic	Anaerobic

A. Only (b)

B. (b) and (c)

C. (b) and (d)

D. All the characteristics are correctly matched

### Answer: A



**47.** Observe the following block of cheese which is produced in Emmentral

, Switzerland . The depression in this cheese are due to



A. release of carbon dioxide by Saccharomyces cerevisiae

B. release of lactic acid by Lactobacilli

C. release of carbon dioxide by Propionibacterium shermanii

D. release of ethanol by Aspergillus niger

**48.** Using the tissue sample found at the crime scene, the forensic investigator ran a DNA analysis with four suspects and the results obtained are shown in the below image. Determine the suspect having the highest probability of been present at the crime scene.

Crime Scene DNA	Suspect A DNA	Suspect B DNA	Suspect C DNA	Suspect D DNA

A. Suspect A

B. Suspect B

C. Suspect C

D. Suspect D

**Answer: C** 



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**49.** The placentation in carnation flower is correctly displayed by which one of the below diagrams?



A.



В.





**Answer: B** 

D.



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**50.** Which of these canals are correctly matched with the organ that they are located in?

A. I, II and IV

B. I and II

C. III and IV

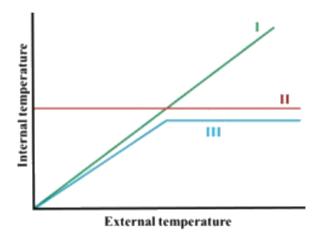
D. I, II, III and IV

### **Answer: C**



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**51.** Which of the following organisms follow the graphs I, II and III respectively?



A. I - salamandra, II - Trygon, III - corvus

- B. I struthio, II Myxine, III sorex
- C. I Balanoglossus, II Amphioxus, III Canis
- D. I Hippocampus, II Psittacula, III Spermophilus

### Answer: D



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- **52.** Read the given statements carefully and identify the wrong one.
  - A. All plants have PGA as the first product of  $CO_2$  fixation
  - B. Within the chloroplast, protons in the stoma decrease in number ,
    - while in the lumen of thylakoid , there is accumulation of protons.
  - C. Strom lamellae membranes lack PS II as well as NDAP reductase
    - enzyme .
  - D. Carotenoids protect chlorophyll a from photo oxidation

### Answer: A

**53.** Tree pea plant P, Q and R each having inflated green pods are allowed to grow under natural conditions. 1000 sees from each plant were collected and there were sown to see the properties of their progenies .

The following were the observations:

1000 have inflated green pods 242 constricted green pods 758 inflated green. The correct genotypes of these three plants are

B. 
$$P-Iiqq, Q-IiGG, R-IiGq$$

A. P - IIGG, Q - IiGg, R - IIGg

$$\mathsf{C.}\,P-IIGG,Q-IiGG,R-IIGg$$

$$\mathsf{D.}\,P-Iigg,Q-Iigg,R-IIGg$$

### Answer: C



**54.** Describe the formation of helobial endosperm.

A. the first nuclear division of primary endosperm nucleus is followed by equal cytoplasmic division

- B. the first nuclear division of primary endosperm nucleus is followed by another nuclear division
- C. the first nuclear division of primary endosperm nucleus is followed by unequal cytoplasmic division with the larger cell towards the
- D. the first nuclear division of primary endosperm nucleus is followed by unequal cytoplasmic division With the larger cell towards the micropyle

### Answer: D



**55.** Given below is a photographer of a recently extinct animal. Identify the animal and the region where it was found .



A. Thylacine : Australia

B. Dodo : Mauritius

C. Quagga: Africa

D. Staller's sea cow: Russia

## Answer: A



56. Which statement from below is correct regarding the five kingdom system of classification?

A. Kingdom Protista has brought together chlamydomonas and chlorella with Paramecium and Amoeba.

B. Kingdom Protista has brought together chlamydomonas and spirogyra with Paramecium and Amoeba.

C. Five kingdom system of classification brought together the

prokaryotic bacteria and blue green algae with other groups which were eukaryotic.

D. Kingdom fungi has brought together all heterotrophic organisms.

### Answer: A



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57. Which of these options correctly represents the functions of all these enzymes?

	Transferase	Ligase	Isomerase	Lyase
(i)	Enable transfer of group other than H	Linking together of two compounds	geometrical or	Removes groups by process other than hydrolysis
(ii)	Linking together of two compounds	Interconversion of molecules for similar optical, geometrical or positional shapes	Removes	Enable transfer of group other than H
(iii)	tranefer of	l '	Linking together of two compounds	Removes groups by process other than hydrolysis
(iv)	Removes groups by process other than hydrolysis	Linking together of two compounds	Interconversion of molecules for similar optical, geometrical or positional shapes	Enable transfer of group other than H

A. (i)

B. (ii)

C. (iii)

D. (iv)

### **Answer: A**



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**58.** During electrophoresis of the digested DNA , the DNA fragment closest to the cathode is

- A. the heaviest and is positively charged
- B. the lightest and is positively charged
- C. the heaviest and is negatively charged
- D. the lightest and is negatively charge

### Answer: B



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**59.** As compared to the other cells in a mammalian testis, Leydig cells will have more amount of

- A. Rough Endoplasmic Reticulum
- B. Golgi complex
- C. Smooth Endoplasmic Reticulum
- D. Lysosomes

#### **Answer: C**



- **60.** Each of these options has a pair of diseases. Which option has one of these diseases is caused due to hypersecretion of a hormone and the other one is caused due to hyposecretion of the same hormone. Which one doesn't have this kind of pair ?
  - A. Acromegaly and Dwarfism
  - B. Myxoedema and Thyrotoxicosis
  - C. Hypoglycemia and Hyperglycemia
  - D. Tetanus and Tetany

### **Answer: D**



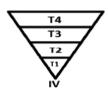
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**61.** Which of the following correctly represent the pyramid of biomass in aquatic ecosystem ?









A. I

B. II

C. III

D. IV

**Answer: D** 



**62.** Which of the following statements is correct about the evolution of dinosaurs ?

A. Triceratops evolved from Tyrannosaurus

B. Brachiosaurus evolved from stegosaurus

C. Stegosaurus evolved from Triceratops

especially in the legs and genitals.

D. Tyrannosaurus evolved from Brachiosaurus

#### **Answer: D**



- **63.** Which of these symptoms is caused by the entry of sporozoites?
  - A. Oedema (swelling) and thickening of skin and underlying tissues
  - B. Characteristics fever causing a feeling of cold, chills and rigor

followed by increase in temperature and finally causing profuse

sweating C. Vomiting, indigestion and diarrhea, gastrointestinal pain and discomfort D. Abscess in the liver **Answer: B** Watch Video Solution 64. The female part homologus to the penis is A. Bartholin's gland B. Ovary C. Labia majora D. Clitoris Answer: D

**65.** Certain events of DNA replication and transcription are listed below . Identify the combination that is incorrect .

No.	Event	Transcription	DNA
			Replication
11	Adenine pairs with	No	Yes
	thymine	INO	
	Both DNA		
2	polynucleotide chains	tide chains No	
	act as templates		
3	Uracil pairs with	Yes	No
	adenine	163	
1	The original DNA		
	molecule is changed	Yes	No
	after the process		

**A.** 1

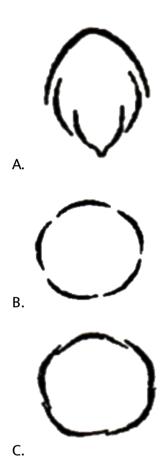
B. 2

C. 3

D. 4

**Answer: D** 

**66.** Which of the following correctly depicts the aestivation of petals in the flower of cotton ?





# **Answer: D**



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# **67.** Match the names correctly with their achievement.

Scientist	Contribution
a. E.	i. Isolated auxin from coleoptile tips of oat
Kurosawa	seedling
b. F.	ii. Confirmed the release of a volatile
Skoog	substance from ripened oranges that
and Miller	hastens ripening of bananas
c. F. W.	iii. The foolish seedling disease of rice
Went	III. The foolish seeding disease of fice
d. H.H.	iv Identified and erretallized kinetin
Cousins	iv. Identified and crystallized kinetin

A.a-iii,b-ii,c-iv,d-i

B. a - iii, b - iv, c - i, d - ii

#### **Answer: B**



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**68.** Which of the following groups of algae belongs to class

Rhodophyceae?

- A. Ectocarpus , Dictyota, Fucus, and sargassum
- ${\bf B}.$  Ectocarpus , Dictyota , porphyra , and Gracilaria
- C. Chlamydomonas Volvox, Ulothrix, and Fucus
- $\ensuremath{\mathsf{D}}.$  Sargassum , Dictyota , Gracilaria , and Gelidium

### **Answer: A**



**69.** Raj having genotype AaBBCc for skin colour marries simran having genotype AAbbCc for skin colour . What is the chance that they have a child whose skin colour doesn't match with either Raj's or Simran 's?

- A. 12.5~%
- B. 16.67~%
- C. 25~%
- D.  $50\,\%$

## **Answer: C**



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**70.** Which of the following statements is incorrect regarding diaphragm, cervical cap, and vaults ?

A. These prevent conception by blocking the entry of sperms through

the cervix

B. These are made up to rubber that are inserted into female

reproductive tract to cover the cervix.

- C. These provide additional benefit of protecting the user from contracting STD and AIDS .
- D. These are reusable.

#### **Answer: C**



- **71.** Which of the following reaction requires enzyme pyruvate dehydrogenase?
  - A. Pyruvate to acetic acid
  - B. Pyruvate to acetaldehyde
  - C. Pyruvate to lactic acid
  - D. Pyruvate to acetyl CoA

# Answer: D



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**72.** Which of the following flowers produce assured seed set even in the absence of pollinators ?

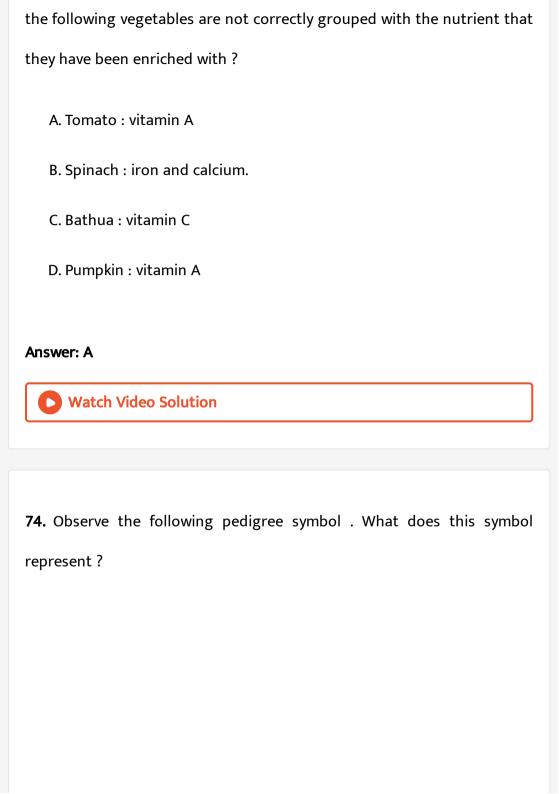
- A. Salvia
- B. Fig
- C. Common pansy
- D. Zostera

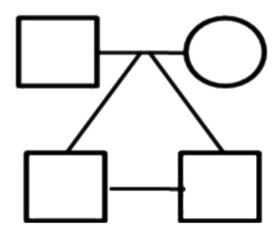
### Answer: C



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**73.** The Indian Agricultural Research Institute, New Delhi has released several vegetable crops that are rich in vitamins and minerals. Which of





- A. The couple has a pair of monozygotic twins
- B. The couple has a pair of dizygotic twins
- C. The couple are cousins or closed relative to each other
- D. The couple had both the offspring suffering from an autosomal recessive disorder

### **Answer: A**



**75.** Select the incorrect statement with respect to cartilage .

A. The intercellular material of cartilage is solid and pliable .

B. It resists compression .

C. All the cartilages in vertebrate embryo are replaced by bone.

D. Chondrocytes are cells of cartilage.

#### **Answer: C**



**76.** Which of the following describes the position of micropyle and chalaza in an orthotropous ovule ?

A. Straight - line of a funiculus

B. Parallel to funiculus

C. At right angles to funiculus

D. Oblique to funiculus

# Answer: A



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77. Select the correct pairing.

- A. Chrysophytes Slime moulds
- B. Red dinoflagellates Gonyaulax
- C. Mycoplasma Smallest eukaryote
- D. Anabaena Mycobiont

### **Answer: B**



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**78.** Which of the following is correct about pBR322?

A. ori - original restriction endonuclease

B. rop - codes for proteins that help in replication

C. Hind III and EcoRI - Selectable markers

D.  $tet^R$  - gene that makes bacterium sensitive to tetracycline

#### **Answer: B**



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**79.** Which of the following conclusions about a flower can't be deduced

just by observing the floral formula?

A. The flower has epipetalous stamens .

 $\ensuremath{\mathsf{B}}.$  The flowers has epigenous insertion of floral whorls .

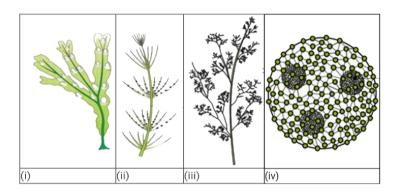
C. The flower has epigenous insertion of floral whorls.

D. The flower is actinomorphic.

### **Answer: B**



# **80.** Which of these algae have a haplo - diplontic life cycle ?



- A. (i)
- B. (ii)
- C. (iii)
- D. (iv)

# Answer: C



**81.** Read the statements about ethylene given below and select the statements that are correct.

- a. Ethylene is a simple gaseous PGR.
- b. Ethylene breaks seed & bud dormancy.
- c. Ethylene is used to initiate flowering .
- d. Ethylene promotes root growth & root hair formation .
  - A. b,c, and d are correct
  - B. Only 'a' is correct
  - C. b and d are correct
  - D. a, b, c and d are correct

### **Answer: D**



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**82.** How many of the following diseases shows inheritance pattern similar to Mendelian factors ?

Cystic fibrosis , Klinefelter's syndrome, Haemophilia , Down's syndrome ,
Sickle cell anemia , Colour blindness , Turner's syndrome , Thalassemia ,
Phenylketonuria
A. 4
B. 5
C. 6
C. 6
D. 3

## Answer: C



**83.** Identify the given figure .



A. Tuber of potato

B. Bulb of onion

- C. Bulbil of Agave
- D. Offset of water hyacinth

**Answer: C** 



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**84.** The following is strip of MALA- D oral contraceptive pills . Which of these statements about it is true ?



A. The white tablets don't contain estrogen and progesterone

- B. The dark tablets don't contain estrogen and progesterone
  - C. The white tablets should be started from the first day of menstruation
- D. The dark tablets should be started one week after the menstruation stops

### Answer: B



- 85. For entry into the respiratory pathway, fatty acid must convert into
  - A. Pyruvic acid

  - C. Acetyl CoA
  - D. DHAP

B. PGAL

# Answer: C

**86.** An angiospermic male plant with 24 chromosomes in its pollen mother cells is crossed with female plant bearing 24 chromosomes in its root cells . What would be the ploidy of embryo and endosperm respectively formed after this cross ?

- A. 24 and 48
- B. 24 and 24
- C. 48 and 72
- D. 24 and 36

**Answer: D** 



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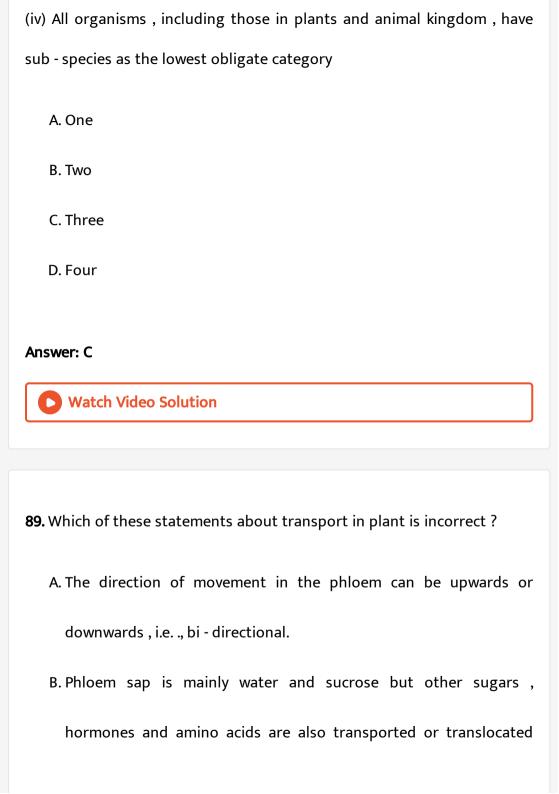
**87.** Cockroach, a type of insect, has an organ for breaking down the food particles called

- A. Crop
- B. Gizzard
- C. Hepatic caeca
- D. Malphigian tubules

#### **Answer: B**



- **88.** Read the following statements regarding living organisms . How many of the following statements are incorrect ?
- (i) As we go higher from species to kingdom, the number of common characteristics goes on increasing .
- (ii) Lower the taxa m more are the characteristics that the members within the taxon share.
- (iii) Lower the category , greater is the difficulty of determining the relationship to other taxa at the same level.



through phloem.

C. Xylem transports only inorganic nutrients while phloem transports only organic materials

D. The chief sinks for the mineral elements are the growing regions of the plant , such as the apical and lateral meristems , young leaves , developing flowers , fruits and seeds , and the storage organs .

### **Answer: C**



**90.** A woman whose mother is colourblind and father is haemophilic marries a man whose mother is haemophilic and father is colourblind. Which of the following is correct about its progeny?

A. Thay won't have any who is free from both these diseases

B. Half of their children are haemophilic while the other half are colourblind.

C. Half of their children will be colourblind while one fourth will be

haemophilic

D. Half of their children will be colourblind while one fourth will be colourblind

### **Answer: D**

