



BIOLOGY

NTA MOCK TESTS ENGLISH

NTA NEET SET 56

Biology

1. Select the option regarding the tissues that are grouped under the ground tissues?

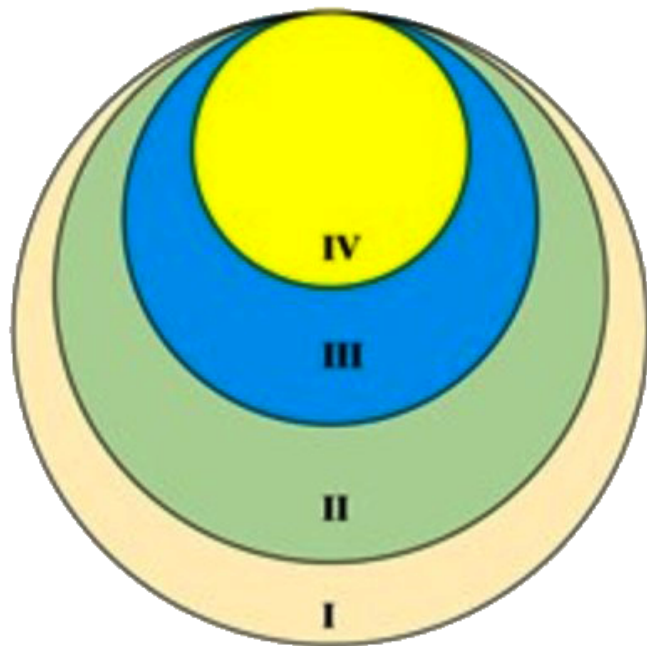
- A. all tissues internal to endodermis
- B. all tissues external to endodermis
- C. all tissues external epidermis and vascular bundles
- D. epidermis and cortex

Answer: C



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



	I	II	III	IV	IV
i	Animals with three germ layers	Animals having bilateral symmetry	Animals with no coelom	Animals with a chitinous exoskeleton.	Animals with a chitinous exoskeleton.
ii	Animals with radial symmetry	Animals with calcareous ossicles	Animals with rasping organs called a radula	Animals with three pairs of legs	Animals with three pairs of legs
iii	Animals with completely extracellular digestion	Animals with a chitinous exoskeleton.	Animals with three pairs of legs and two pairs of wings	Animals with book gills as their respiratory organs	Animals with book gills as their respiratory organs
iv	Animals with notochord during embryonic stages	Animals with well-defined jaws	Animals with 12 pairs of cranial nerves	Animals which can maintain their internal temperature constant	Animals which can maintain their internal temperature constant

A. i

B. ii

C. iii

D. iv

Answer: D



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

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

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

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

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

Answer: A



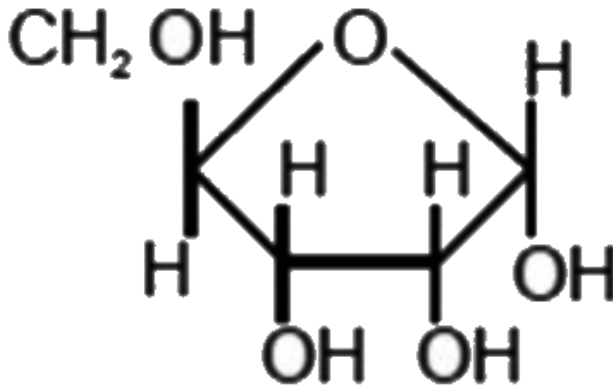
4. The interactions of ligands with protein,
- A. usually result in the activation of the proteins
 - B. are relatively rare in biological systems.
 - C. are usually irreversible
 - D. are usually transient

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 mosaic virus
- D. Monosaccharide that is present in the genetic material of lambda bacteriophage

Answer: C

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

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

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

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

C. (a) - (ii) , (b) - (iv) , (c) - (iii) , (d) - (i)

D. (a) - (iv) , (b) - (ii) , (c) - (i) , (d) - (iii)

Answer: B

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 valve- bicuspid valve
- C. tricuspid have - bicuspid value - pulmonary semilunar value - aortic semilunar
- D. tricuspid valve - pulmonary semilunar valve - aortic semilunar valve - bicuspid valve

Answer: D



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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



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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



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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

A. One

B. Two

C. Three

D. Four

Answer: C



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12. Which of these glands are correctly matched with their embryonic origin and chemical nature of their hormones?

	Gland	Germ layer of formation	Chemical nature of hormones
(i)	Adrenal cortex	ectoderm	steroids
(ii)	Adrenal medulla	mesoderm	catecholamines
(iii)	Pancreas	mesoderm	polypeptides
(iv)	Parathyroid Gland	endoderm	polypeptides

A. (i)

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 → Longitudinal muscles → Circular muscles →

Mucosa → Submucosa

B. Mucosa → Submucosa → Circular muscles → Longitudinal

muscle → Serosa

C. Serosa → Longitudinal muscles → Circular muscles →

Submucosa → Mucosa

D. Serosa → Longitudinal muscles → Oblique muscles →

Circular muscles → Submucosa → Mucosa

Answer: C



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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 → Homo habilis → Homo sapiens →
Homo erectus
- B. Ramapithecus → Neanderthal Man → Cro Magnon Man →
Homo erectus → Homo sapiens
- C. Dryopithecus → Australopithecus → Homo habilis →
Homo erectus → Homo sapiens
- D. Dryopithecus → Homo erectus → Java Man → Homo habilis
→ 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 acid
<i>i</i>	S_3T_1	S_2T_3	S_1T_2
<i>ii</i>	S_2T_2	S_1T_1	S_3T_3
<i>iii</i>	S_1T_3	S_2T_2	S_3T_3
<i>iv</i>	S_3T_3	S_2T_2	S_1T_1

A. i

B. ii

C. iii

D. iv

Answer: D



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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 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



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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 microbe	Scientific Name	Commercial Product
(i)	Bacterium	<i>a</i>	Clot buster enzyme
(ii)	<i>b</i>	<i>Aspergillus niger</i>	Citric acid
(iii)	Fungus	<i>Monascus purpureus</i>	<i>c</i>
(iv)	Bacterium	<i>d</i>	Butyric acid

- A. (a) Lactobacillus (b) Fungus (c) Strain (d) Penicillium roquefortii
- B. (a) Streptococcus (b) Fungus (c) Strain (d) Clostridium butylicum

C.

(a)	(b)	(c)	(d)
Streptococcus	Bacteria	Cyclosporin	Clostridium butylicum

D.

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

Answer: B



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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 glutamate 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



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

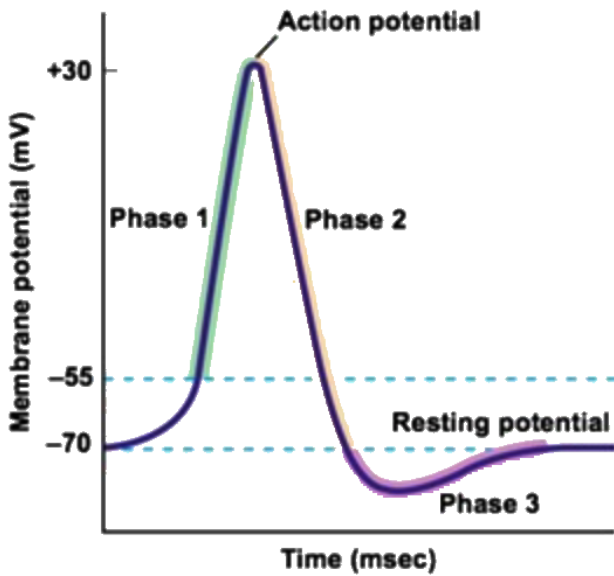
- A. Jan ingenuous
- B. Joseph Priestley
- C. Von Sachs
- D. Engelmann

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.

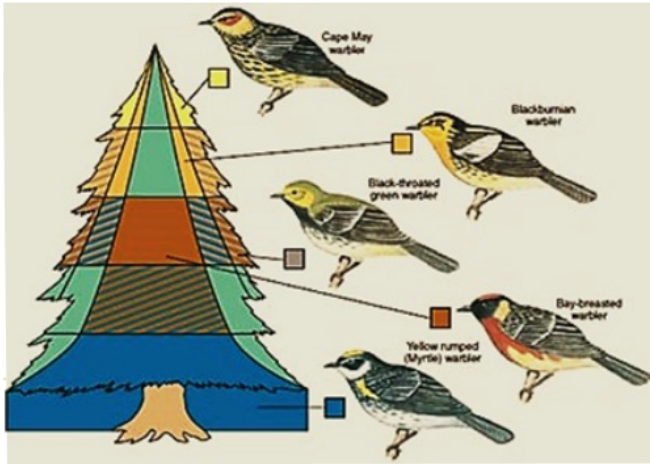
C. Phase I : Sodium channels open causing movement of sodium ions from the axoplasm to the extracellular fluid . Phase II : Potassium channels open causing movement of potassium ions from the extracellular fluid to the axoplasm.

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



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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



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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



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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 incorrectly ?

- 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



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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 .(Ichthyophis)
- 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.



A. $P < Q < R < S$

B. $Q < S < P < R$

C. $Q < S < R < P$

D. $Q < R < S < P$

Answer: C



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33. Select the combination that correctly matches the fungi to respective class.

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

	(1)	(2)	(3)	(4)
(I)	<i>i</i>	<i>iii</i>	<i>iv</i>	<i>ii</i>
(II)	<i>ii</i>	<i>iii</i>	<i>iv</i>	<i>i</i>
(III)	<i>iii</i>	<i>ii</i>	<i>i</i>	<i>iv</i>
(IV)	<i>iv</i>	<i>i</i>	<i>ii</i>	<i>iii</i>

A. (I)

B. (II)

C. (III)

D. (IV)

Answer: B



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34. Match the proteins with their appropriate properties .

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

A. (1) - (iii) ,(2) , - (ii) , (3) - (iv) , (4) - (i) , (5) - (vi) , (6) - (v)

B. (1) - (vi) ,(2) , - (ii) , (3) - (i) , (4) - (v) , (5) - (iv) , (6) - (iii)

C. (1) - (i) ,(2) , - (iv) , (3) - (ii) , (4) - (v) , (5) - (iii) , (6) - (vi)

D. (1) - (ii) ,(2) , - (iv) , (3) - (v) , (4) - (iii) , (5) - (i) , (6) - (vi)

Answer: B



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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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36. State which of these statements about blood group (ABO system and Rh system taken together) is correct.

- 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 systems is the universal donor

Answer: A



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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 bronchioles
- 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



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40. 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 ?

- A. Aerobic condition

- B. High temperature
- C. Moderate temperature
- D. Low 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. E-waste
- D. Bio-medical waste

Answer: C



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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 because they are shed off during parturition .

Answer: B



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

	Characteristic	Red fibres	White fibres
(a)	Myoglobin content	High	Low
(b)	Sarcoplasmic reticulum content	High	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



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47. Observe the following block of cheese which is produced in Emmental , Switzerland . The depression in this cheese are due to



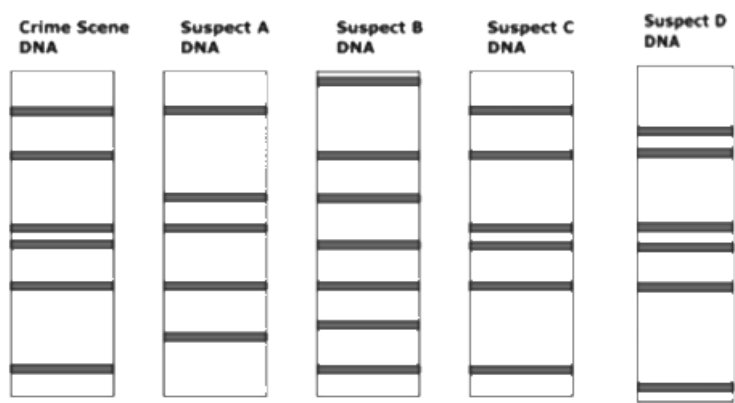
- A. release of carbon dioxide by *Saccharomyces cerevisiae*
- B. release of lactic acid by *Lactobacilli*
- C. release of carbon dioxide by *Propionibacterium shermanii*
- D. release of ethanol by *Aspergillus niger*

Answer: C



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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.



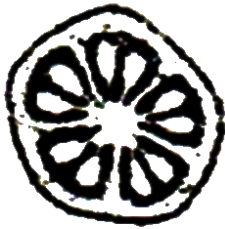
- A. Suspect A
- B. Suspect B
- C. Suspect C
- D. Suspect D

Answer: C



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



A.



B.



C.



D.

Answer: B



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50. Which of these canals are correctly matched with the organ that they are located in? I. Central canal: vertebral column II. Neural canal: spinal cord III. Canal of schlemm: eye IV Semicircular canal: ear

A. I , II and IV

B. I and II

C. III and IV

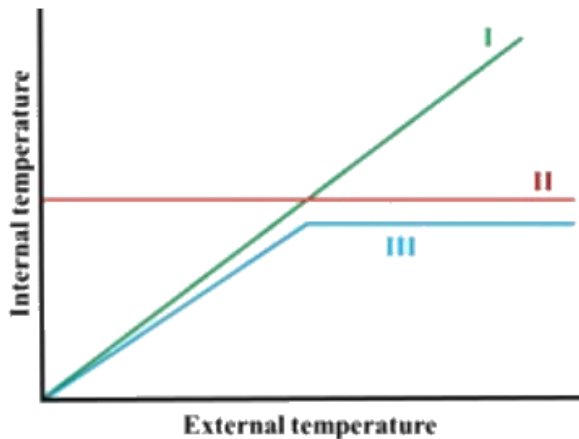
D. I, II , III and IV

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 - Sperophilus

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



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53. 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 chalaza

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

Answer: D



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54. Given below is a photograph 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

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55. 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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56. 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	Interconversion of molecules for similar optical, geometrical or positional shapes	Removes groups by process other than hydrolysis
(ii)	Linking together of two compounds	Interconversion of molecules for similar optical, geometrical or positional shapes	Removes groups by process other than hydrolysis	Enable transfer of group other than H
(iii)	Enable transfer of group other than H	Interconversion of molecules for similar optical, geometrical or positional shapes	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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57. 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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58. 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



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59. 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 ?

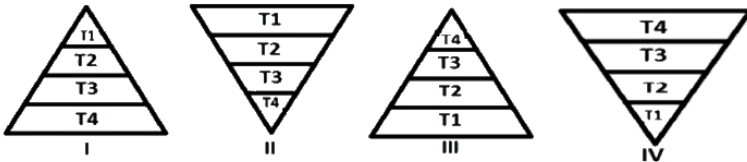
- A. Acromegaly and Dwarfism
- B. Myxoedema and Thyrotoxicosis
- C. Hypoglycemia and Hyperglycemia
- D. Tetanus and Tetany

Answer: D



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



A. I

B. II

C. III

D. IV

Answer: D



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61. 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

D. Tyrannosaurus evolved from Brachiosaurus

Answer: D



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62. Which of these symptoms is caused by the entry of sporozoites ?

- A. Oedema (swelling) and thickening of skin and underlying tissues especially in the legs and genitals .
- 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



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63. The female part homologous to the penis is

A. Bartholin's gland

B. Ovary

C. Labia majora

D. Clitoris

Answer: D



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

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

A. 1

B. 2

C. 3

D. 4

Answer: D



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



A.



B.



C.



D.

Answer: D



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66. Match the names correctly with their achievement.

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

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

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

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

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

Answer: B



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67. Which of the following groups of algae belongs to class Rhodophyceae ?

- A. Ectocarpus , Dictyota, Fucus, and sargassum
- B. Ectocarpus , Dictyota , porphyra , and Gracilaria
- C. Chlamydomonas Volvox , Ulothrix , and Fucus
- D. Sargassum , Dictyota , Gracilaria , and Gelidium

Answer: A



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68. Raj having genotype AaBBCc for skin colour marries simran having genotype AAbbCc for skin colour . What is the change 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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69. 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



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70. 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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71. 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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72. The Indian Agricultural Research Institute , New Delhi has released several vegetable crops that are rich in vitamins and minerals. Which of the following vegetables are not correctly grouped with the nutrient that they have been enriched with ?

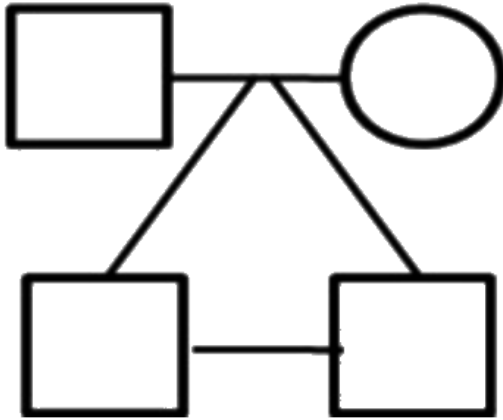
- A. Tomato : vitamin A
- B. Spinach : iron and calcium.
- C. Bathua : vitamin C
- D. Pumpkin : vitamin A

Answer: A



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73. Observe the following pedigree symbol . What does this symbol represent ?



- 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



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74. 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



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75. 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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76. 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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77. 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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78. Which of the following conclusions about a flower can't be deduced just by observing the floral formula ?

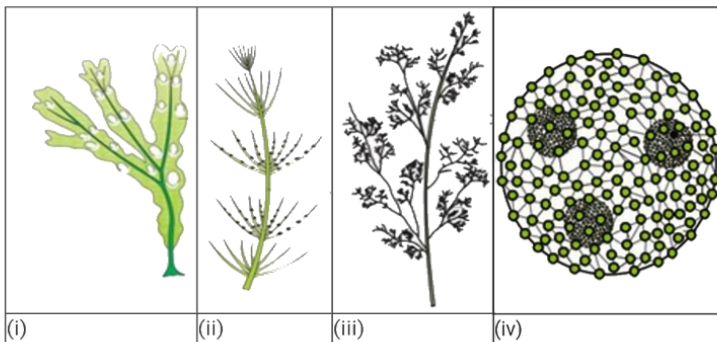
- A. The flower has epipetalous stamens .
- B. The flowers has epigenous insertion of floral whorls .
- C. The flower has epigenous insertion of floral whorls.
- D. The flower is actinomorphic.

Answer: B



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79. Which of these algae have a haplo - diplontic life cycle ?



A. (i)

B. (ii)

C. (iii)

D. (iv)

Answer: C



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80. 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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81. Find out the total number of mendelian disorders from the following :

Cystic fibrosis , Haemophilia, sickle cell anaemia , colour blindness ,
Thalassemia, phenylketonuria

A. 4

B. 5

C. 6

D. 3

Answer: C



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82. 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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83. 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



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84. For entry into the respiratory pathway , fatty acid must convert into

- A. Pyruvic acid
- B. PGAL
- C. Acetyl CoA

D. DHAP

Answer: C



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85. 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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86. 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



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87. 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 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.
- (iv) All organisms , including those in plants and animal kingdom , have sub - species as the lowest obligate category

- A. One
- B. Two
- C. Three
- D. Four

Answer: C



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88. Which of these statements about transport in plant is incorrect ?

- A. The direction of movement in the phloem can be upwards or downwards , i.e. , bi - directional.
- B. Phloem sap is mainly water and sucrose but other sugars , hormones and amino acids are also transported or translocated 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



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89. 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. They 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



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