1 **Which of the following group of organisms is the heterotroph part of any lichen?**

A) Fungi
B) Animals
C) Prokaryotes
D) Plants
E) Protoctist

Doğru Cevap : A

2

Where is the genetic material located in the mitochondrion?

A) II only
B) II and IV only
C) IV only
D) I only
E) I and IV only

Doğru Cevap : C

3 Carbohydrate metabolism of humans is shown below.

I. Starch → Maltose
II. Maltose → Glucose
III. Glucose → Glycogen
IV. Glucose → Lactic acid

In which of the numbered stages above do the hydrolysis enzymes work?

A) I, II and IV
B) I, II and III
C) III and IV
D) I and II
E) I, II, III and IV

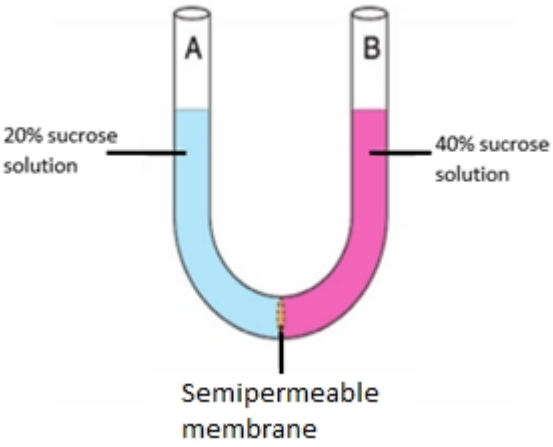
Doğru Cevap : D

4 **If the number of chromosomes in a cell undergoing meiosis is 'X' at the end of telophase I then what is going to be the number of chromosomes in each cell formed at the end of meiosis?**

A) 2X
B) X
C) X/4
D) X/2
E) 3X/2

Doğru Cevap : B

5



As shown above, a 20% sucrose solution was added to arm A of the U-tube and a 40% sucrose solution was added to arm B, which were separated from each other by a semipermeable membrane. The apparatus was set aside for a while.

Which of the events given would be expected to occur, when sufficient time has passed?

I. Sucrose passage from arm B to arm A
II. Equalization of liquid concentrations in arms A and B
III. Equalization of sucrose amounts in arms A and B

A) Only II
B) II and III
C) I, II, and III
D) Only I
E) I and III

Doğru Cevap : A

6 **Which of the following <u>is not</u> distinctive feature of Chordata?**

A) Dorsal hollow nerve cord
B) Notochord
C) Post-anal tail
D) Pharyngeal slits
E) Bilateral symmetry

Doğru Cevap : E

7 **Which of the following is the branch of science where research on the naming and classification of living things is carried out?**

A) Taxonomy
B) Ecology
C) Phylogenetics
D) Microbiology
E) Histology

Doğru Cevap : A

8 The table gives some features of three different groups of organisms. “+” sign represents the presence, “-“ represents the absence of the feature.

Feature of organism	Type of organism		
	Bacteria	Fungi	Viruses
Have a carbohydrate containing cell wall	I	+	-
May feed by saprotrophic nutrition	II	+	-
Can evolve	+	+	III
Definitely contain RNA	+	+	IV
All are pathogens	-	V	+

Which signs must be added to the table for I to V?

A) +, +, +, -, -
B) -, +, -, -, +
C) +, -, -, +, +
D) -, +, +, +, -
E) +, +, -, -, -

Doğru Cevap : A

9 The diameter of living cells varies considerably. Typical diameter of a prokaryote, such as *Streptococcus* is 800nm, whereas of a eukaryotic cell, such as a white blood cell is 16µm.

Given these measurements, the diameter of the white blood cell is how many times greater than the diameter of prokaryote?

A) x200
B) x20
C) x50
D) x500
E) x2

Doğru Cevap : B

10 **Which of the following apparatus is used to measure breathing volumes?**

A) Spirometer
B) Sphygmomanometer
C) Electrocardiogram
D) Pacemaker
E) Respirometer

Doğru Cevap : A

11 **Which of the factors given below decreases the breathing rate?**

I. Increase in body temperature
II. Increase in acidity of blood
III. Increase in altitude
IV. Increase in pH value of blood

A) I and IV
B) I and II
C) III and IV
D) Only IV
E) II and III

Doğru Cevap : D

12 Below, a reaction occurring in human blood is shown.

$$CO_2 + H_2O \rightarrow H_2CO_3 \rightarrow HCO_3^- + H^+$$

Regarding the shown reaction,

I. It occurs under enzymatic control in red blood cells.
II. It occurs during the passage of blood through tissue capillaries.
III. The HCO3- formed during the reaction is transported in to the cytoplasm of red blood cells.

Which of the statements is/are correct?

A) I, II, and III
B) Only I
C) I and II
D) I and III
E) II and III

Doğru Cevap : C

13 **Which of the following are correct for both muscles and nervous control of digestive system?**

A) Skeletal muscle- somatic
B) Smooth muscle- somatic
C) Skeletal muscle- autonomic
D) Striated muscle- autonomic
E) Smooth muscle- autonomic

Doğru Cevap : E

14 I. Can pass through the cell membrane
II. Used in dehydration reactions on ribosomes
III. Used as energy supply in cells
IV. Used as a substrate in the hydrolysis reactions

Which of the above are not the properties of all the end products of digestion reactions?

A) I and II
B) II and III
C) I, III and IV
D) II and IV
E) I and III

Doğru Cevap : D

15 Information about some digestive enzymes found in mammals is given.

Enzyme	Main organ(s) secreted	Main effects
A	Duodenum and jejunum	Stimulates pancreatic secretion of enzymes such as insulin and bicarbonate ions (HCO_3^-); reduces gastric motility, inhibits gastric acid secretion.
B	Stomach and duodenum	It stimulates secretion of gastric acid (HCl), pepsinogen and increases gastric motility.
C	Duodenum	It releases digestive enzymes and bile from the pancreas and gallbladder.

According to this information, which enzymes are named correctly?

A) A: Secretin, B: Cholecystokinin, C: Gastrin
B) A: Gastrin, B: Cholecystokinin, C: Secretin
C) A: Cholecystokinin, B: Gastrin, C: Secretin
D) A: Secretin, B: Gastrin, C: Cholecystokinin
E) A: Gastrin, B: Secretin, C: Cholecystokinin

Doğru Cevap : D

16 **Which of the following statements is <u>not</u> true about hydrolysis reactions?**

A) Hydrolysis is usually carried out by hydrolysis enzymes.
B) Hydrolysis does not require ATP during the reaction.
C) Hydrolysis can take place in an organ lumen or inside a cell.
D) Hydrolysis allows monomers to be obtained.
E) Macromolecules are synthesized by hydrolysis.

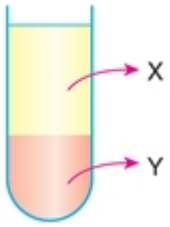
Doğru Cevap : E

17 **Which of the following cells are involved in the adaptive immune response?**

A) Macrophages
B) B lymphocytes
C) Erythrocytes
D) Neutrophils
E) Basophils

Doğru Cevap : B

18



The X and Y regions formed as a result of centrifugation of the blood placed in the test tube are shown in the figure above.

According to this, in the region indicated by X in the figure;
I. antibody,
II. hemoglobin,
III. fibrinogen,
IV. platelet

which of the structures can be found?

A) II, III, and IV
B) II and IV
C) I and III
D) I, II, and IV
E) I and II

Doğru Cevap : C

19 **Which of the following is <u>not</u> a correct statement about the effects of carbon dioxide (CO2) in the human body?**

A) CO2 is observed at progressively lower levels towards peripheral tissues and cannot bind to hemoglobin.
B) The increase in CO2 level in the blood leads to a decrease in blood pH.
C) Higher levels of CO2 in the blood increases the rate of respiration.
D) CO2 does not change total lung capacity.
E) CO2 reacts with water in the blood, raising the level of carbonic acid.

Doğru Cevap : A

20 **Which heart cells create impulses rhythmically without the need for any stimulus?**

A) Sino-atrial node cells
B) Purkinje fibers
C) Endocardial cells
D) Cardiac muscle cells
E) Atrioventricular node cells

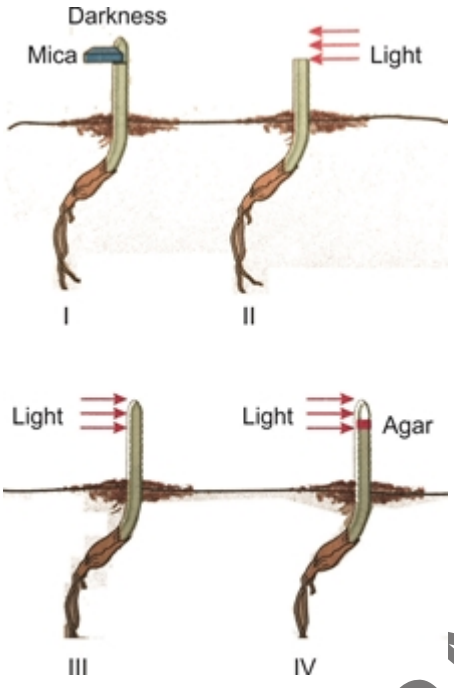
Doğru Cevap : A

21 **Which of these hormones can easily pass through a cell's plasma membrane?**

A) Erythropoietin
B) Insulin
C) Glucagon
D) Testosterone
E) Oxytocin

Doğru Cevap : D

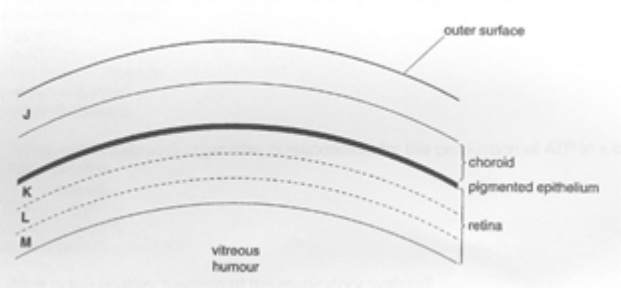
22 **Which of the coleoptiles will bend?**



A) III and IV
B) I, III and IV
C) II, III and IV
D) I and IV
E) I and II

Doğru Cevap : B

23 The figure shows the complete back wall of the mammalian eye.



Which of the following show the correct position of the cells and structures in the layers?

A) J: many collagen fibers
K: photoreceptors
L: bipolar neurons
M: ganglion cells

B) J: bipolar neurons
K: many collagen fibers
L: ganglion cells
M: photoreceptors

C) J: many collagen fibers
K: ganglion cells
L: bipolar neurons
M: photoreceptors

D) J: ganglion cells
K: photoreceptors
L: bipolar neurons
M: many collagen fibers

E) J: many collagen fibers
K: bipolar neurons
L: photoreceptors
M: ganglion cells

Doğru Cevap : A

24 I. Malpighian tubules, the excretory organs of insects, facilitate the excretion of uric acid through the digestive canal.
II. Protonephridia in annelids excrete nitrogenous waste products to the exterior of the body.
III. In the kidneys of saltwater fish, the glomerulus cluster is large, and the loop of Henle is short.

Which of the following statements is/are true regarding structures responsible for maintaining homeostasis in different organisms?

A) Only I
B) II and III
C) Only II
D) I and II
E) Only III

Doğru Cevap : D

25 **Which of the following changes happen in a person that stays out in cold weather?**

I. Increase in blood pressure
II. Increase in breathing rate
III. Constriction of skin capillaries
IV. Increase in urine formation

A) Only II
B) II and III
C) I and II
D) I, II, III and IV
E) I, II and IV

Doğru Cevap : E

26 Medical researchers tested two different medications treating type I diabetes. Both Drug 1 and Drug 2 mimic the effects of insulin on muscle, brain and liver cells. The table depicts the serum levels of the drugs in patients through eight hours after injection.

	Serum Drug Concentration (mU/L)	
Time (min)	Drug 1	Drug 2
0	11	17
60	35	69
120	40	43
180	40	28
240	32	20
300	23	17
360	21	12
420	19	11
480	11	11

Two identical twin patients, Arthur and Brad, with type I diabetes were given large identical meals.

Then, Arthur was injected with Drug 1, and Brad with Drug 2. What effect(s) will most likely be observed in Arthur and Brad?

I. The amount of glucose in the blood will decrease faster in Arthur.
II. The amount of glucose in muscle cells will increase in both.
III. The amount of glucose stored in the liver will decrease in both.
IV. Arthur will have a more consistent blood glucose level throughout.

A) Only I and II
B) Only III
C) Only II
D) I, II and IV
E) Only II and IV

Doğru Cevap : E

27 **Which of the following is <u>NOT</u> a function of the skeleton?**

A) Performing the movement function together with the muscles
B) Maintenance of body temperature
C) Storage of minerals and fat
D) Formation of blood cells
E) Providing the structural support for the body

Doğru Cevap : B

28 **What is the correct descending arrangement of the following in a human bicep muscle?**

I. Muscle fiber
II. Myofibril
III. Muscle bundle
IV. Myosin
V. Sarcomere

A) III – I – II – IV – V
B) III – I – II – V – IV
C) IV – V – II – I – III
D) I – III – II – V – IV
E) V – IV – II – I – III

Doğru Cevap : B

29 **Which of the following statements is <u>not</u> correct about asexual reproduction?**

A) There is no expenditure of energy maintaining reproductive success
B) The offsprings are genetically identical to the parent
C) Large number of offspring can be produced quickly
D) It enables animals living in isolation to reproduce without mate
E) It is advantageous when the environment is changing

Doğru Cevap : E

30 **Which is/are definitely true for a human cell capable of undergoing meiosis?**

I. contains diploid number of chromosomes
II. is found in gonads of male or female
III. contains two types of gonosomes

A) Only II
B) I and II
C) II and III
D) Only I
E) I, II and III

Doğru Cevap : B

31 Many hormones are involved in the regulation of the human reproductive system and the development of reproductive cells.

Which of the following statements about the hormone and its function is correct?

A) Luteinizing hormone (LH): Initiates menstruation in females, stimulates Leydig cells in males and releases hormones.
B) Follicle-stimulating hormone (FSH): It stimulates the growth of immature ovarian follicles in the testicles. In females, FSH stimulates and initiates spermatogenesis in the pituitary gland.
C) Progesterone: Regulates pregnancy and produced by the adrenal cortex during the first weeks of pregnancy.
D) Testosterone: Stimulates ovulation and promotes the development of the endometrium.
E) Gonadotropin-releasing hormone (GnRH): Made by the hypothalamus and GnRH controls the synthesis and release of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) in the anterior pituitary gland.

Doğru Cevap : E

32 **Which of these increase(s) the movement of sap within the xylem?**

I. Water moves into guard cells' vacuoles
II. Humidity increases in surrounding air
III. Root endodermis prevents ions from entering xylem

A) Only II
B) Only I and III
C) Only II and III
D) Only I
E) I, II and III

Doğru Cevap : D

33 **Which of the following tissue acts as controlled entry to the vascular cylinder (stele) in roots by blocking the passage of water and dissolved solute?**

A) Epidermis
B) Pericycle
C) Endodermis
D) Cortex
E) Root hairs

Doğru Cevap : C

34 Some plant tissues are given below.

Which of the below cells uses O_2 and produces CO_2?

I. Stone cells
II. Guard cells
III. Phloem
IV. Xylem
V. Collenchyma

A) I, II and III
B) II, III and V
C) IV and V
D) I and II
E) II and III

Doğru Cevap : B

35 **Which of the following is <u>not</u> one of the contributions of saprophytes to ecosystem?**

A) They form the main food sources of other living things by storing starch.
B) They accelerate the return of inorganic substances to ecosystem.
C) They ensure the development and maintenance of a healthy ecosystem.
D) They help to eliminate the decomposition of organic waste.
E) They play an important role in the carbon and nitrogen cycle.

Doğru Cevap : A

36 In North Cyprus, forests in the Mersinlik region were burnt down in a wildfire in 2022.

If the land is left untouched, then which phenomenon will be observed in the following years?

A) Primary succession
B) Interspecific competition
C) Decomposition
D) Desertification
E) Secondary succession

Doğru Cevap : E

37 In a tropical food web, 900,000kJ of energy are produced by autotrophic species.

Approximately how much energy will exist at the level of tertiary consumers?

A) 900kJ
B) 9,000kJ
C) 90,000kJ
D) 900,000kJ
E) 90kJ

Doğru Cevap : A

38 **Which of the following statements about acid rain is true?**

I. Acid rain is caused by nitric acid and sulfuric acid
II. Acid rain can damage plants directly
III. Acid rain can cause magnesium and calcium to be leached from the soil

A) I and II
B) I, II, and III
C) Only I
D) Only II
E) II and III

Doğru Cevap : B

39 Global warming can be directly and indirectly linked to many of the environmental problems faced today.

Which would be most indirectly linked to global warming?

A) Habitat loss
B) Changing sex ratios of some species
C) Longer allergy seasons
D) Acidification of the oceans
E) Invasive species

Doğru Cevap : E

40 **Which of the following molecule is responsible for attaching a specific amino acid to tRNA during protein synthesis?**

A) Ribosomal RNA
B) Aminoacyl tRNA synthetase
C) Initiation factors
D) Peptidyl transferase
E) Elongation factors

Doğru Cevap : B

41 The figure about the gene structure of a eukaryotic cell is drawn.

Eukaryotik Gene Structure

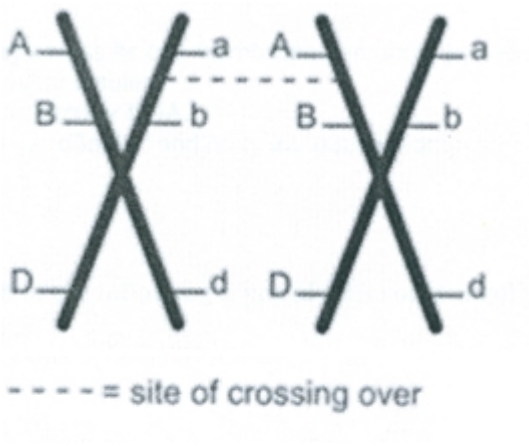
ATG: Translation Start Site
TT: Translation Termination Site

Accordingly, which of the information given about the horizontal striped regions marked as IV and VI is correct?

A) They provide binding with rRNA, found in ribosomes.
B) Mutations occurring in these regions do not affect the cell.
C) The chemical structure of the amino acids they encode is different.
D) DNA base sequences are different from the other regions.
E) They are not involved in the transcription process.

Doğru Cevap : B

42 The diagram below shows a pair of homologous chromosomes and the site of crossing over.



Which answer in the table is correct when meiosis is complete?

Row	Number of recombinant daughter chromosomes produced	Number of daughter chromosomes that are genetically distinct from each other
I	1	2
II	2	1
III	4	2
IV	2	4
V	4	4

A) II
B) I
C) IV
D) III
E) V

Doğru Cevap : C

43 **The following change is an example of which type(s) of mutation?**
Original DNA sequence: TACCTTCGTTGG
New DNA sequence: TAACCTCCGTTGG

I. Frameshift
II. Duplication
III. Substitution

A) I and II
B) Only II
C) I, II and III
D) Only I
E) II and III

Doğru Cevap : C

44 **Considering gametogenesis in humans, which of the following is <u>not</u> a correct statement?**

A) Gametogenesis occurs in both males and females in humans.
B) The organs where gametogenesis takes place are different in males and females.
C) Gametes produced in humans as a result of gametogenesis are diploid.
D) Gametes are produced as a result of oogenesis in females and spermatogenesis in males.
E) Gametogenesis is carried out by meiosis in humans.

Doğru Cevap : C

45 Firstborn of a woman with B Rh^- blood type from a man with A Rh^+ has O Rh^- blood type.

What is the probability of AB blood type and risk of blood incompatibility for their second child?

A) 1/16
B) 1/4
C) 1/32
D) 1/8
E) 1/2

Doğru Cevap : D

46 **Which of the following is <u>not</u> an adaptation acquired by animals during the transition from water to land in evolution?**

A) Decrease in the proportion of amniotic fluid in the structure of the egg
B) Drawing respiratory organs into the body
C) Development of skin to prevent water loss
D) Conversion of ammonia, a nitrogenous waste product, into urea and uric acid for excretion
E) Fertilization occurring inside the female body

Doğru Cevap : A

47 **Which of the following can alter allele frequencies in a population?**

I. Genetic drift
II. Gene flow
III. Natural selection

A) Only III
B) Only II
C) I, II and III
D) Only I
E) I and II

Doğru Cevap : C

48 **Which of the following descriptions can <u>not</u> be used for selective breeding?**

A) Parents with desired features are chosen
B) It is a repeated process
C) It is a natural process
D) Parents with desired features breed
E) Organisms with desired features are obtained after many generations

Doğru Cevap : C

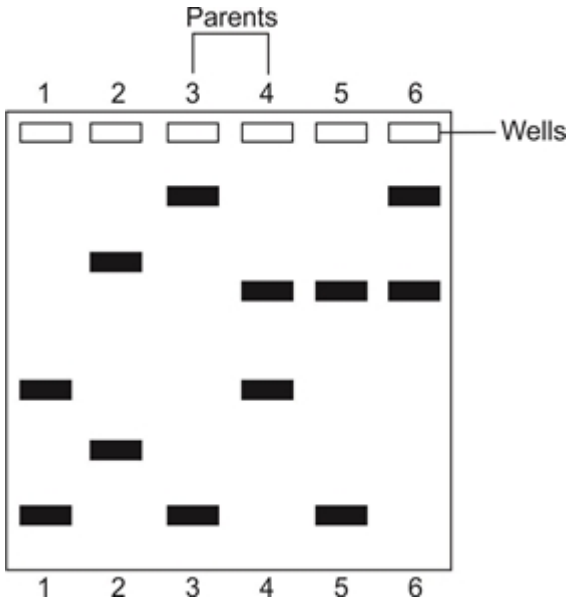
49 **Which of the statements below is / are true for stem cells?**

I. Embryonic stem cells can differentiate into any type of cell
II. A stem cell is a cell that has the ability to divide many times by mitosis while remaining undifferentiated
III. The use of stem cells to treat a disease is called stem cell theraphy. The most common form of stem cell theraphy is the use of bone marrow transplants

A) II and III
B) Only III
C) I and II
D) Only II
E) I, II and III

Doğru Cevap : E

50 Several days after a litter of three purebred puppies was born, a breeder noticed one extra puppy in the litter. The diagram below shows the results of electrophoresis of DNA fragments from all the dogs. The puppies are labelled 1, 2, 5 and 6. The parent dogs are labelled 3 and 4.



Identify which puppy might have been placed into this litter by mistake.

A) 1
B) 5
C) 3
D) 6
E) 2

Doğru Cevap : E

51 The table below shows the number of protons, number of electrons, and mass number of three atoms.

Atom	Number of protons	Number of electrons	Mass number
A	9	10	19
B	11	11	23
C	12	10	24

According to the data given in the table;
I. A is isoelectronic with C.
II. B is a neutral atom and C is an anion.
III. Number of neutrons in A is 10.

Which statement(s) is/are correct?

A) Only II
B) I, II
C) I, II, III
D) Only I
E) I, III

Doğru Cevap : E

52 Ernest Rutherford designed an experiment to test atom model. In this experiment very thin sheets of gold metal were bombarded with positively charged alpha particles from a radioactive source. The result of the experiment is as follows. Most of the particles went straight through as expected. A few were appreciably deflected. A very few particles were deflected almost directly back toward the alpha particle source.

According to the results of the experiment, which of the following is <u>incorrect</u> according to Rutherford's atomic model?

A) Most of the particles pass without any deflection shows that most of the atomic volume is empty space.
B) A very small portion of the particles are deflected and returned indicates that they hit positively charged particles.
C) At the center of the atom, there is a region with positively charged protons and uncharged neutrons.
D) A near miss of nucleus by an alpha particle results in repulsion and deflection.
E) A small portion of the particles are slightly deflected indicates that the positively charged particles are at the center of the atom.

Doğru Cevap : C

53 During the manufacturing of certain foods and medicines, a process is employed where a high-pressure gas is rapidly expanded to create a solid product.

What is this process called, which causes a significant drop in temperature and solidification of the product <u>without passing through the liquid state</u>?

A) Evaporation
B) Fusion
C) Deposition
D) Condensation
E) Sublimation

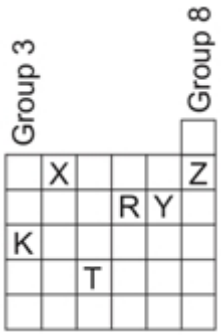
Doğru Cevap : C

54 **Which of the following statements is <u>wrong</u>?**

A) Solids have low rate of diffusion.
B) Solids have high melting points.
C) Solids have a high compression ratio.
D) Solid have a definite shape and volume.
E) Solids have strong intermolecular forces.

Doğru Cevap : C

55 A part of p block of the periodic table is given below.



Consider only the elements shown in the table.

Which one of the following is <u>wrong</u>?

A) The maximum oxidation number of T is +5
B) Z has the smallest atomic size
C) K is a member of earth metals
D) X^{-4} and Y^{+7} are isoelectronics
E) R can not reach the electronic configuration of Z in its compounds

Doğru Cevap : E

56 **The reaction between calcium chloride and silver nitrate is given below.**

$CaCl_2(aq) + AgNO_3(aq) \longrightarrow Ca(NO_3)_2(aq) + AgCl(s)$

Which of the following options presents the balanced equation of this reaction correctly?

A) $2CaCl_2(aq) + AgNO_3(aq) \longrightarrow 2Ca(NO_3)_2(aq) + AgCl(s)$
B) $2CaCl_2(aq) + 2AgNO_3(aq) \longrightarrow 2Ca(NO_3)_2(aq) + 2AgCl(s)$
C) $CaCl_2(aq) + AgNO_3(aq) \longrightarrow Ca(NO_3)_2(aq) + AgCl(s)$
D) $CaCl_2(aq) + 3AgNO_3(aq) \longrightarrow Ca(NO_3)_2(aq) + 2AgCl(s)$
E) $CaCl_2(aq) + 2AgNO_3(aq) \longrightarrow Ca(NO_3)_2(aq) + 2AgCl(s)$

Doğru Cevap : E

57 All of the following are weak acids.

Which one is the exception?

A) HF
B) HCOOH
C) HNO_3
D) H_2CO_3
E) CH_3COOH

Doğru Cevap : C

58 **Which information is false?**

A) Scientists use pH scale to measure how strong or weak an acid or alkali is
B) Indigestion tablets release an alkali to neutralize the acid in the stomach
C) Acids react with alkalis to produce salt and water
D) Acids turn red litmus paper blue
E) Toothpaste is alkaline so it neutralizes the acid in your mouth

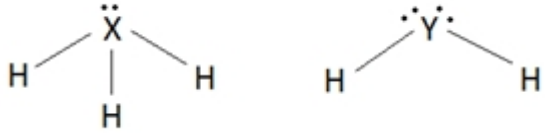
Doğru Cevap : D

59 **Which one of the following is correct for the use of elements?**

A) Carbon is used as a fuel in space shuttle
B) Alloys of nickel is used to make coins
C) Fluorine is used to make medicine
D) Calcium is used in construction industry to obtain steel
E) Neon is used to kill bacteria in the swimming pools

Doğru Cevap : B

60 **The Lewis structures of the compounds formed by elements X and Y with element H are given**



below.

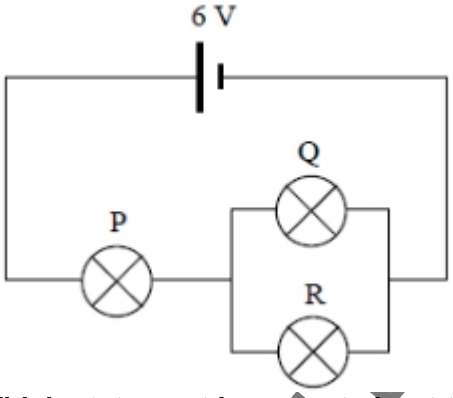
According to this, which of the following statements are correct?

I. X is a 5A group element.
II. The compound made by element Y is apolar and the bonds are polar.
III. The number of unpaired electron pairs in the compound formed by element X is 2.

A) I and III
B) II and III
C) I and II
D) I, II and III
E) Only I

Doğru Cevap : E

61 Diagram shows an electric circuit with three identical bulbs.

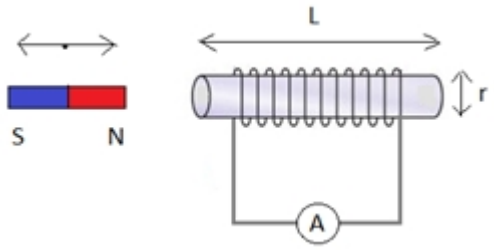


Which statement is correct about the circuit?

A) Bulb P is brighter than bulb Q
B) The potential difference across P is smaller than across R
C) The current in P is equal to the current in Q
D) The potential difference across Q is smaller than across R
E) The three bulbs light up with equal brightness

Doğru Cevap : A

62



The figure shows a conductor wrapped around a metal rod of length L and radius r and an ammeter connected between the ends of the conductor. When the magnet next to the metal rod is moved back and forth as shown by the arrows, the current value is read on the ammeter.

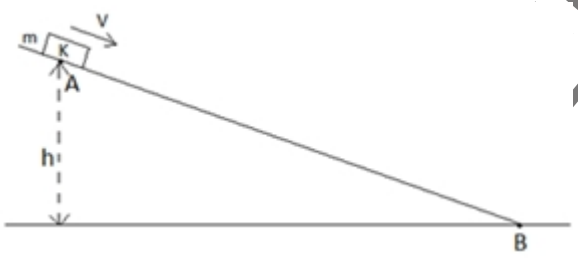
Which of the following increases the value read on the ammeter?

I. increasing length L
II. increasing radius r
III. increasing number of windings
IV. increasing speed of the magnet

A) II and III
B) III and IV
C) I, III and IV
D) I and II
E) II, III and IV

Doğru Cevap : B

63



In a inclined plane, a body K of mass m travelling from point A with velocity V moves to point B with constant velocity.

According to this, which of the following judgements about object K is <u>incorrect</u>?

A) The work done by the weight of object K is mgh joule.
B) The net force acting on object K is 0.
C) The total energy at point A is greater than the total energy at point B.
D) If a body L identical to K is placed on K, it can move with constant speed to point B.
E) The work done by the friction force between A and B is mgh.

Doğru Cevap : E

64 **What is the acceleration of a moving object at t=3 s based on the position function $x(t)=(5t^3-2t^2+2t+1)$ m ?**

A) 18 m/s^2
B) 9 m/s^2
C) 86 m/s^2
D) 36 m/s^2
E) 20 m/s^2

Doğru Cevap : C

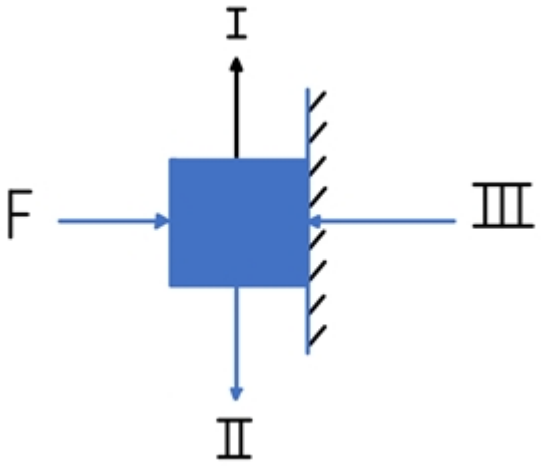
65 **Which of the following is one of the ways of heat transfer?**

I. Conduction
II. Convection
III. Radiation

A) I and II
B) I, II and III
C) Only III
D) Only I
E) Only II

Doğru Cevap : B

66



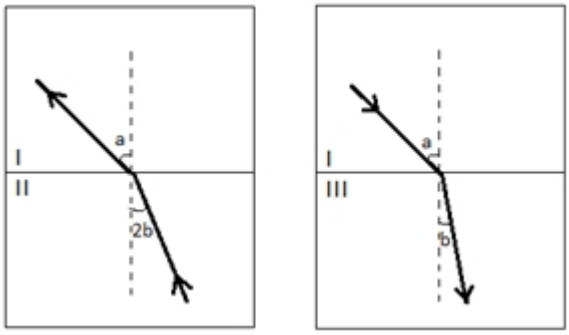
A body of mass m in Figure is pressed against a wall by a horizontal force F, as shown in the diagram.

As long as the body is held horizontally, which of the following is the normal force acting on the body?

A) I, II, III
B) I, II
C) III
D) II
E) I

Doğru Cevap : C

67



The figure above shows the refraction of a light ray in I - II and I - III environments.

According to this, which of the following can be deduced?

I. The refractive index of Environment II
is greater than the refractive index of Environment I.
II. The density of Environment I is greater than the density of Environment II.
III. The refractive index of Environment III
is greater than the refractive index of Environment II.

A) Only II
B) I and II
C) I and III
D) Only I
E) I, II and III

Doğru Cevap : C

68 **Which is a scalar quantity?**

A) acceleration
B) speed
C) weight
D) momentum
E) displacement

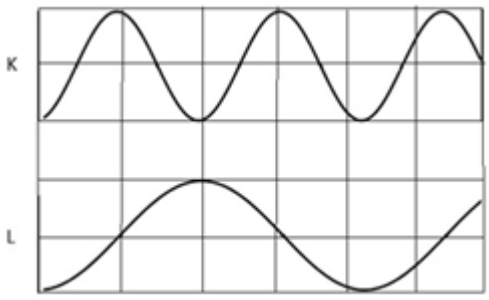
Doğru Cevap : B

69 **What’s a mixture of atomic nuclei to create a new core?**

A) Fission
B) Electrolysis
C) Fusion
D) Physical change
E) Chemical change

Doğru Cevap : A

70



K and L sound waves in the same environment visualised in the figure above;

I. The intensity of the K sound is greater
II. The frequency of the L wave is smaller
III. The speed of K and L waves are equal

Which of the statements are correct?

A) Only II
B) I, II and III
C) Only I
D) II and III
E) I and II

Doğru Cevap : D