

A

17633 **1 Which is the main source of energy for most plants?**

- A) Sun
- B) Fertilizers
- C) Water
- D) Soil
- E) Photosynthesis

17632 **2 I.Installing solar heat panels in our homes
II.Campaigning for mining in the local area
III.Encouraging the use of recycling bins
IV.Planting threes at school
V.Volunteering to clean the beach
Which of the above could be our way of conserving the environment?**

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

17650 **3 "Slimy bodies, live on land and in water, lay eggs in water, swim walk or hop."**

Which class of vertebrates have the above characteristics?

- A) Fish
- B) Amphibians
- C) Reptiles
- D) Mammals
- E) Moses

A

17626 **4 Which of the following does NOT result in the extinction of an endangered species?**

- A) Global warming
- B) Overexploitation
- C) Use of pesticides
- D) Use of renewable energy sources
- E) Logging

17645 **5 Bird-Mammal-Amphibian-Fish
Which of the following match the above order?**

- A) Sparrow - frog - whale - shark
- B) Sparrow - whale - frog - shark
- C) Sparrow - shark - whale - frog
- D) Sparrow - whale - shark - frog
- E) Sparrow - shark - frog - whale

17637 **6 Which of the following is NOT a vertebrate?**

- A) Frog
- B) Lion
- C) Fish
- D) Bird
- E) Snail

17615 **7 Which of the following has yet to be cloned?**

- A) Human
- B) Pig
- C) Mule
- D) Sheep
- E) Calf

A

A

- 8 **I.Reduces the amount of waste for disposal**
II.Prevents useful material resources being wasted
III.Requires an elaborate system of sorting and separation.
IV.Reduces the consumption of raw materials.

Which of the above is NOT benefit of recycling?

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

- 9 **I.Coal usage releases large amounts of greenhouse gas into the atmosphere.**
II.Coal is a renewable energy source.
III. Coal is no longer used as an energy source in the world.

Which of the above is WRONG about coal?

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

- 10 **What do the forensic scientists do?**

- A) They witness crime
 B) They research living things
 C) They eat genes
 D) They investigate crime scenes
 E) They inherit chromosomes

- 11 **Which of the following is NOT one of the concerns of the conservationists?**

- A) Generate profitable businesses
 B) Assist the endangered species
 C) Establish protected areas for wildlife
 D) Build awareness to the importance of a balanced habitat
 E) Encourage the reduction of human population growth

- 12 **Which of the following is NOT the source of food for birds?**

- A) Mouse
 B) Bacteria
 C) Fish
 D) Grass
 E) Seeds

- 13 **Which of the following is NOT a chemical reaction?**

- A) Digesting food
 B) Burning paper
 C) Boiling an egg
 D) Peeling an orange
 E) Baking a cake

A

- 14 I. Crude oil
II. Coal
III. Natural gas
IV. Sun
Which of the above is/are renewable source of energy?

- 17659
A) Only III
B) I and II
C) II and III
D) III and IV
E) Only IV

- 15 Which of the following is NOT the property of mammals?

- 17640
A) They can live on land
B) They feed their young
C) They lay eggs
D) They can live in water
E) They are all vertebrates

- 16 The half life of a certain radioactive particle is 2 minutes. What fraction of the initial value remains after 8 minutes?

- 41169
A) 1/6
B) 1/16
C) 1/8
D) 1/4
E) 1/32

A

- 17 $F_1 = 3N$ - $F_2 = 4N$ - $F_3 = 5N$

What is the maximum and minimum value of the three forces given above if they apply on the same point?

- 41134
A) 7 - 5
B) 12 - 6
C) 8 - 4
D) 12 - 2
E) 12 - 0

- 18 I. J/s
II. kW
III. kWh

Which of the above is/are the unit of energy?

- 41160
A) I and II
B) Only II
C) Only I
D) Only III
E) I and III

- 19 During an experiment a rod makes contact with a positively charged electroscope. It is observed that the leaf of the electroscope closes slightly.

Which of the following is true for the charge of the rod.

- 41153
I. It is positively charged
II. It is negatively charged
III. It is neutral

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

A

- 20 A piece of metal at 500 °C is placed into an insulated container containing 100g of water at 20 °C. If the final temperature of the system becomes 80 °C, find the mass of the metal piece.
($c_{\text{water}} = 1 \text{ cal/g}^{\circ}\text{C}$, $c_{\text{metal}} = 2/7 \text{ cal/g}^{\circ}\text{C}$)

A) 100
B) 35
C) 50
D) 75
E) 350

- 21 Which of the following is NOT used during an experiment to investigate Brownian Motion?

A) Microscope
B) Smoke particles
C) Steam
D) Light source
E) Air molecules

- 22 A piece of steel has a volume of 12cm³ and a mass of 96 grams. What is its density in kg/m³?

A) 8×10^{-3}
B) 8
C) 800
D) 8×10^3
E) 80

A

- 23 I. Mass of the stone
II. Height of the bridge
III. Gravitational acceleration

A girl drops a stone from a bridge. Assuming no air resistance, which of the above must be known for the her to calculate the speed of the stone just as it hits the river below?

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

- 24 $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$

A) $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$
B) $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$
C) $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$
D) $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$
E) $F_1 = 3\text{N}$ – $F_2 = 4\text{N}$ – $F_3 = 5\text{N}$

- 25 A pot removed from a stove gradually cools.
I. Conduction
II. Convection
III. Radiation

Which is the method of heat loss that causes the pot to cool?

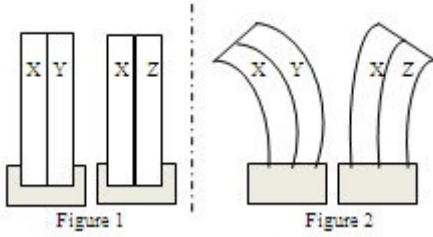
A) II and III
B) I and II
C) Only I
D) I and III
E) I, II and III

A

26 A motorcycle of mass 60kg is travelling at 40m/s. When the breaks is applied, it comes to rest in 30m. What is the average force exerted by the brakes?

- A) 3200
B) 1600
C) 5000
D) 500
E) 200

27



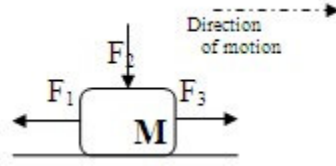
Initial temperatures and lengths of metals X, Y and Z are the same as shown in figure 1. After heating to a certain temperature they appear as in figure 2.

What is the relationship between their coefficient of expansion?

- A) $\alpha_y > \alpha_x > \alpha_z$
B) $\alpha_x > \alpha_y > \alpha_z$
C) $\alpha_x > \alpha_z > \alpha_y$
D) $\alpha_z > \alpha_y > \alpha_x$
E) $\alpha_x = \alpha_z > \alpha_y$

A

28

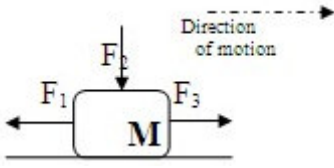


Considering the presence of friction on the diagram above which of the forces F₁ - F₂ - F₃ contribute to the stopping of the object M?

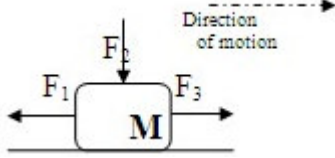
- A) Only F₁
B) Only F₃
C) F₁ and F₂
D) Only F₂
E) F₁, F₂ and F₃

A

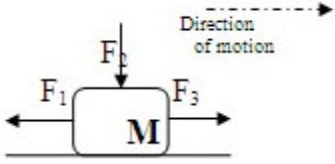
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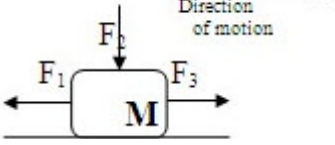
A)



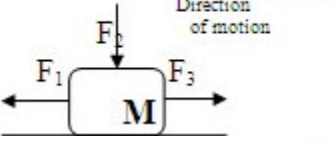
B)



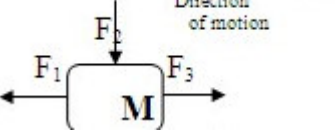
C)



D)



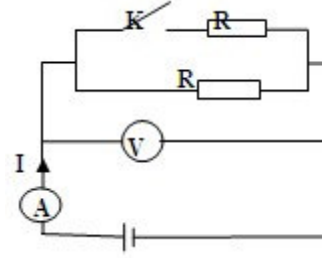
E)



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A

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In the circuit above current I flows through the Ammeter while voltage V is read at the voltmeter. Which of the following occurs when the switch K is closed?

- A) V decrease, I increase
- B) V increase, I remain the same
- C) V increase, I decrease
- D) V and I both increase
- E) V remains the same, I increase

31 Which of the following indicates the ability of an element to form a compound?

- A) The number of valence electrons.
- B) The mass number of the element.
- C) The mass of a single molecule.
- D) The number of neutrons in the nucleus.
- E) The number of isotopes of the element.

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A

32 Which of the following changes when a glass of water is frozen?

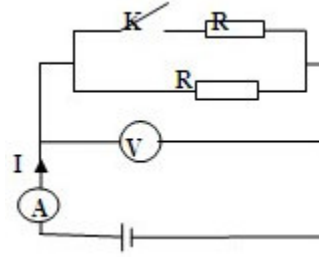
- I. Volume
- II. Mass
- III. Density
- IV. Chemical properties

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

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A

33

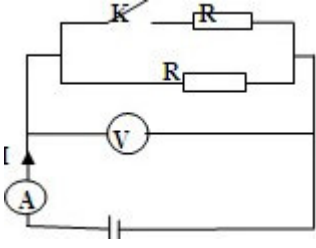


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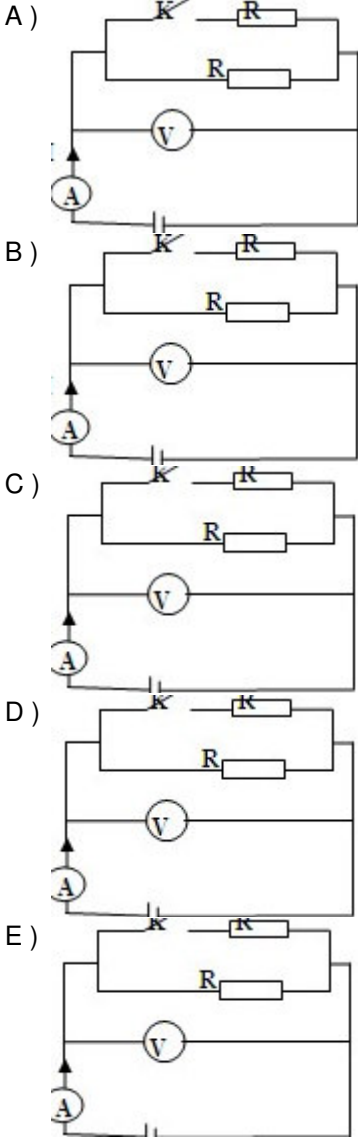
- A)
- B)
- C)
- D)
- E)

A

34



41198



A

35 What is the charge of the chlorine atom in HClO_4 ?

- A) +1
- B) -1
- C) +4
- D) +6
- E) +7

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36



Which of the following is **WRONG** for the above ion?

- A) It contains 18 neutrons
- B) It is a cation
- C) It contains 24 electrons
- D) It has 17 protons
- E) It is a nonmetal

17670

37 Which of the following contains single type molecules?

- A) Pure gold
- B) Pure nitrogen
- C) Steel
- D) Antifreeze
- E) Air

17666

A

38 Which of the following is NOT the property of a gas?

- A) Increasing pressure decreases its volume.
B) Expands when heated.
C) Increasing pressure decreases its density.
D) They can mix at any ratio.
E) Their particles move randomly.

39 $^{35}_{17}\text{X}^{+7}$

- A) $^{35}_{17}\text{X}^{+7}$
B) $^{35}_{17}\text{X}^{+7}$
C) $^{35}_{17}\text{X}^{+7}$
D) $^{35}_{17}\text{X}^{+7}$
E) $^{35}_{17}\text{X}^{+7}$

40 $^{35}_{17}\text{X}^{+7}$

- A) $^{35}_{17}\text{X}^{+7}$
B) $^{35}_{17}\text{X}^{+7}$
C) $^{35}_{17}\text{X}^{+7}$
D) $^{35}_{17}\text{X}^{+7}$
E) $^{35}_{17}\text{X}^{+7}$

A

41 $\text{X}_{(s)} \rightarrow 2\text{Y}_2 (g) \rightarrow \text{XY}_4 (g)$

1 mol of X reacts completely with 140g of Y₂ gas to produce 152g XY₄ gas according to the chemical equation above. Find the mass number of element X.

- A) 18
B) 12
C) 32
D) 6
E) 64

42 Substances X and Y;
I. contain the same number of protons.
II. have different boiling and freezing points.
III. both form compounds that have the same properties.

What sort of substances are X and Y?

- A) Compounds
B) Allotropes
C) Mixtures
D) Ionic
E) Isomers

43 I. Boiling point increases
II. Freezing point decreases
III. Vapour pressure increases

Which of the above occurs when the concentration of a solution increases?

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

A

44 Which of the following affect the solubility of a solid in liquid?

- I. The type of solid
- II. The type of liquid
- III. The temperature
- IV. The size of the solid particles

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

45 Which of the following changes occur when a neutral atom becomes a CATION?

- A) Accepts neutrons
- B) Loses protons
- C) Loses electrons
- D) Accepts electrons
- E) Accepts protons

46 Which of the following is TRUE about the mammalian heart?

- A) Left atrium has the thickest walls.
- B) Oxygenated blood leaves the heart in the carotid artery.
- C) Right atrium receives oxygenated blood from vena cava.
- D) The valves present between atria and ventricles prevent the backflow of blood during ventricular systole.
- E) Pulmonary artery carries oxygenated blood from the lungs to the heart.

A

47 Which of the following reagents is used in a test for a reducing sugar?

- A) Ethanol
- B) Biuret reagent
- C) Iodine solution
- D) Benedict's solution
- E) Sudan III

48 Hormones are chemicals that regulate many biological processes in the body and help in homeostasis. Which of the following takes place when blood sugar level rises?

- A) Pancreas secretes glucagon which lowers blood sugar level.
- B) Liver converts glycogen to glucose.
- C) Pancreas secretes insulin which reduces blood sugar level.
- D) Pancreas secretes adrenaline which causes the conversion of sugars to glycogen in the liver.
- E) Adrenal glands secrete adrenaline which lowers blood sugar level.

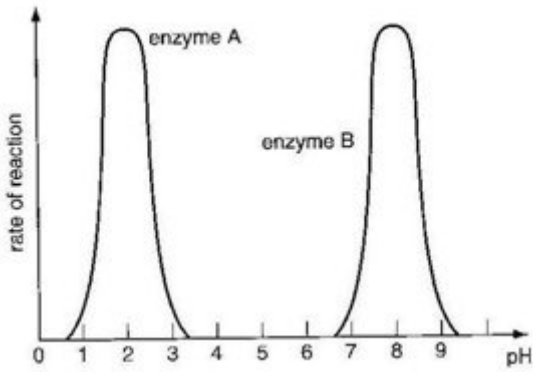
49 Which of the following parts of the brain controls the sense of balance and muscle actions?

- A) Cortex
- B) Medulla
- C) Hypothalamus
- D) Cerebrum
- E) Cerebellum

A

50

42698



Which of the following enzymes is possibly enzyme B?

- A) Ligase
- B) Pepsin
- C) Salivary amylase
- D) Rennin
- E) Trypsin

51 In an investigation, three potato chips of exactly the same size were placed in three different test tubes A, B and C. Test tube A contained distilled water, tube B contained a weak sugar solution and tube C contained a strong sugar solution. After an hour, they were taken out and their sizes were compared to their original size. Which of the following is an expected result?

42690

- A) The chip in tube C increased in size.
- B) The chip in tube B had the greatest increase in size.
- C) The chip in tube A increased in size.
- D) The chip in tube A remained the same in size.
- E) All the chips decreased in size.

A

52 Which of the following does not take place during exhalation?

42723

- A) Volume of thorax decreases.
- B) Diaphragm relaxes.
- C) External intercostal muscles contract.
- D) Ribs are pulled down and in.
- E) Diaphragm becomes dome shaped.

53 Which of the following microorganisms causes the disease malaria in humans?

42741

- A) Plasmodium
- B) Yeast
- C) Streptococcus
- D) Lactobacillus bulgaricus
- E) Staphylococcus

54 Which of the following is NOT a characteristic of palisade tissue in plants?

42689

- A) Each cell has a centrosome.
- B) Each cell has a large central vacuole.
- C) The cells are rectangular.
- D) The cells contain many chloroplasts.
- E) It is located just underneath the upper epidermis.

A

A

55 Fertilisation is the fusion of the nuclei of male and female gametes to form the zygote. There are two types of fertilisation: external and internal. Which of the following statements is TRUE?

- A) In internal fertilisation, female produces less ova.
- B) External fertilisation is more advantageous than internal fertilisation.
- C) The chance for a sperm to find and fuse with an ovum is higher in external fertilisation.
- D) All aquatic animals carry out external fertilisation.
- E) Internal fertilisation takes place in the uterus of a mammal.

56 Which of the following is NOT a type of asexual reproduction?

- A) Conjugation
- B) Budding
- C) Binary fission
- D) Sporulation
- E) Vegetative propagation

57 Amount of energy needed per day for a person is increased greatly if:

- A) the person is above 50.
- B) the person is breast-feeding.
- C) the person is an adult female.
- D) the person is an office worker.
- E) the person is a baby.

58 Which of the following is true about cigarette smoke?

- A) Nicotine in cigarettes is a yellow substance and it stains the fingers and teeth of smokers.
- B) It contains nicotine which causes cancer.
- C) It contains carbon monoxide which reduces the capacity of haemoglobin to carry oxygen.
- D) It contains tar which is addictive.
- E) Carbon monoxide in cigarette smoke is a carcinogen.

59 Which of the following is a rich source of iron in diet?

- A) Fish
- B) Oranges
- C) Meat
- D) Carrots
- E) Milk

60 Which of the following is TRUE about the three types of blood vessels?

- A) Blood inside veins flows under a high pressure.
- B) Blood flow inside the capillaries is very fast.
- C) Arteries have valves inside them to prevent the backflow of blood.
- D) Veins have thinner walls than arteries.
- E) Arteries always carry oxygenated blood.

TEST BİTTİ

CEVAPLARINIZI KONTROL EDİNİZ