

7th Science

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Winmeen E Learning

Email: admin@winmeen.com

Mobile: 6385150514

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பெரிய வெற்றியடைய வாழ்த்துக்கள்.

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7th Science Lesson 1 Questions in English

1] Measurement

- Which among the following is not the physical quantities?
 - Mass
 - Distance
 - Temperature
 - None of the above
- Which among the following is not the classification of physical quantities?
 - Fundamental quantities
 - Derived quantities
 - Logistic quantities
 - None of the above
- Which among the following statement is correct
 - A set of physical quantities which cannot be expressed in terms of any other quantities are known as "Derived quantities". Their corresponding units are called "Derived units".
 - All other derived quantities which can be obtained by multiplying, dividing or by mathematically combining the derived quantities are known as "Fundamental quantities". Their corresponding units are called "Fundamental units".
 - Only 1
 - Only 2
 - Both 1 and 2
 - None
- Which among the following is the Derived unit of Area?
 - m
 - m^2
 - m^3
 - None of the above
- Which among the following is the Fundamental unit of Luminous (light) intensity?
 - Mole
 - Ampere
 - Candela
 - Kelvin
- Which among the following is the derived unit of Electric charge?
 - square metre (or) m^2
 - cubic metre (or) m^3
 - $kg\ m^{-3}$
 - Coulomb (C)
- What is the area of 10 squares each of side of 1 m?
 - 1 square metre
 - 10 square metres
 - 100 square metres
 - 0.1 square metre
- Which among the following is the area of Triangle?
 - a^2
 - lb
 - πr^2
 - $(1/2) \times b \times h$
- The area of such irregularly shaped figures can be calculated using what?
 - Formula
 - Graph sheet
 - Linear line
 - None of the above
- Find the area of the following regular shaped figures: (Take $\pi = 22/7$)
 - A rectangle whose length is 12 m and breadth is 4 m
 - A circle whose radius is 7 m.
 - A triangle whose base is 6 m and height is 8 m
 - 3m, 22m, $48m^2$
 - $48m^2$, 22m, $48m^2$
 - $48\ m^2$, $154\ m^2$, $24\ m^2$
 - $16m^2$, $154m^2$, $24m^2$
- The amount of space occupied by a three-dimensional object is known as its ____
 - Area
 - Surface area
 - Breadth
 - Volume
- The SI unit of volume is _____
 - m^{-2}
 - m^2
 - m^3
 - m^{-3}
- Which among the following is the formula used to find volume of cuboid?
 - a^3
 - $l \times b \times h$
 - $\frac{4}{3} \pi r^3$

d) $\pi r^2 h$

14. Which among the following is the formula used to find volume of cylinder?

- a) a^3
 b) $l \times b \times h$
 c) $\frac{4}{3} \pi r^3$
 d) $\pi r^2 h$

15. Find the volume of (Take $\pi = 22/7$)

- i. a cube whose side is 3 cm
 ii. a cylinder whose radius is 3 m and height is 7 m.

- a) $9 \text{ cm}^3, 198 \text{ m}^3$
 b) $9 \text{ cm}^3, 66 \text{ m}^3$
 c) $27 \text{ cm}^3, 198 \text{ m}^3$
 d) $27 \text{ cm}^3, 66 \text{ m}^3$

16. Which among the following is the formula used to find the volume of sphere?

- a) a^3
 b) $l \times b \times h$
 c) $\frac{4}{3} \pi r^3$
 d) $\pi r^2 h$

17. Which among the following statement is correct

1) Liquids also occupy some space and hence they also have volume. But liquids do not possess any definite shape. So, the volume of a liquid cannot be determined as in the case of solids. When a liquid is poured into a container, it takes the shape and volume of the container.

2) The volume of any liquid is equal to the space that it fills and it can be measured using a measuring cylinder or measuring beaker. The maximum volume of liquid that a container can hold is known as the "capacity of the container". The volume of a liquid is equal to the volume of space it fills in the container. This can be directly observed from the readings marked in the measuring containers.

3) To understand this unit of volume, let us first understand how much a litre means. Litre is the commonly used unit to measure the volume of liquids. we can understand that the unit of volume is cubic cm if the dimensions of the object are given in cm. This cubic cm is commonly known as cc. A volume of 100 cc is termed as one litre (l). $1 \text{ litre} = 100 \text{ cc}$ or cm^3 $100 \text{ ml} = 1 \text{ litre}$.

- a) Both 1 and 2
 b) Both 1 and 3
 c) Both 2 and 3
 d) All 1, 2 and 3

18. Which among the following is not the unit to measure the volume of liquids?

- a) Gallon
 b) Ounce
 c) Quart
 d) Pascal

19. Which among the following is the value of 1 gallon?

- a) 2482 ml
 b) 3785 ml
 c) 4824 ml
 d) 1893 ml

20. Which is defined as the mass of the substance contained in unit volume (1 m³)?

- a) Surface area
 b) Quarts
 c) Density
 d) Mole

21. Which among the following is the equation of density?

- a) $D = M V$
 b) $D = 1/MV$
 c) $D = M/V$
 d) $D = M+V$

22. What is the SI unit of density?

- a) Kg m
 b) Kg/m
 c) Kg/m^2
 d) Kg/m^3

23. The CGS unit of density is _____

- a) g/m^3
 b) g/cm^3
 c) kg/cm^3
 d) kg/m^3

24. The materials with lower density are called _____

- a) Denser
 b) Rarer
 c) Pitcher
 d) Glitter

25. Which among the following material has higher density?

- a) Air
 b) Kerosene
 c) Water

d) Mercury

26. What is the density of wood?

a) 770 kg/m³

b) 1200 kg/m³

c) 1780 kg/m³

d) 2190 kg/m³

27. Which among the following material has higher density?

a) Gold

b) Copper

c) Silver

d) Iron

28. A solid cylinder of mass 280 kg has a volume of 4 m³. Find the density of cylinder?

a) 1040 kg m³

b) 70 kg/m³

c) 284 kg m³

d) None of the above

29. A box is made up of iron and it has a volume of 125 cm³. Find its mass. (Density of iron is 7.8 g / cm³).

a) 16.02 cm⁶ g⁻¹

b) 7.605 kg

c) 975 g

d) None of the above

30. Which among the following equation is incorrect

1) Density = Mass × Volume

2) Mass = Density / Volume

3) Volume = Density / Mass

a) Both 1 and 2

b) Both 1 and 3

c) All the above

d) None of the above

31. A sphere is made from copper whose mass is 3000 kg. If the density of copper is 8900 kg/m³, find the volume of the sphere.

a) 0.34 m³

b) 2.96 m⁻³

c) 11,900 kg/m³

d) None of the above

32. Which among the following is the unit used in space research by astronomers to measure very long distances such as the distance between the earth and a star or the distance between two stars?

a) Astronomical unit

b) Celestial point

c) Conjunction unit

d) All the above

33. What is the density of castor oil?

a) 748 kg/m³

b) 892 kg/m³

c) 961 kg/m³

d) 1038 kg/m³

34. Which is position of the shortest distance between the earth and the sun?

a) aphelion position

b) Perihelion position

c) Proxima position

d) Kepler position

35. What is the distance between sun and earth in perihelion position?

a) 122.3 million kilometres

b) 138.6 million kilometres

c) 147.1 million kilometres

d) 158.9 million kilometres

36. Which is the position of farthest distance between the earth and the sun?

a) aphelion position

b) Perihelion position

c) Proxima position

d) Kepler position

37. What is the distance between sun and earth in aphelion position?

a) 149.4 million kilometres

b) 152.1 million kilometres

c) 158.6 million kilometres

d) 163.9 million kilometres

38. The average distance between the earth and the sun is about -----

a) 143.4 million kilometres

b) 149.6 million kilometres

c) 151.4 million kilometres

d) 153.7 million kilometres

39. What is the distance of Neptune from the sun?

a) 12 AU

b) 26 AU

c) 30 AU

d) 42 AU

40. The nearest star to our solar system is -----

a) Alpha Centauri

b) Proxima Centauri

- c) Sirius
d) Betelgeuse
41. We can clearly see that using the AU for measuring distances of stars would be unwieldy. Therefore, astronomers use a special unit, called -----
- a) Light year
b) Astronaut year
c) Century year
d) Sirius year
42. What is the speed of light in vacuum?
- a) 1.2×10^8 m
b) 3×10^8 m
c) 4.2×10^8 m
d) 5×10^8 m
43. What is the value of 1 light year?
- a) 9.46×10^{15} m
b) 10.13×10^{15} m
c) 14.62×10^{15} m
d) 19.31×10^{15} m
44. In terms of light year, Proxima Centauri is at what distance from Earth and the Solar System (and Earth)?
- a) 1.72 light-years
b) 2.91 light-years
c) 4.22 light-years
d) 6.18 light-years
45. The Earth is located about how many light-years away from the galactic centre?
- a) 12000 light-years
b) 18000 light-years
c) 20000 light-years
d) 25000 light-years
46. What is the value of 1 ounce of liquid?
- a) 15 ml
b) 30 ml
c) 42 ml
d) 58 ml

7th Science Lesson 2 Questions in English

2] Force and Motion

1. The shortest distance from the initial to the final position of an object is called _____

- a) Projectile
- b) Velocity
- c) Transient
- d) Displacement

2. Which among the following statement is correct

1) When an object travels from one place to another, it will reach slower if it travels along the straight-line path. The straight-line path is the longest distance between two points.

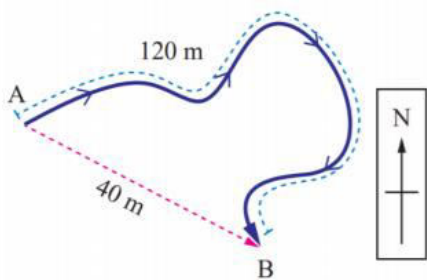
2) The total length of a path taken by an object to reach one place from the other is called distance.

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

3. What is the SI unit of displacement?

- a) m
- b) m/s
- c) $m\ s^{-2}$
- d) kg/s

4. The path of an object travelling from A to B is shown in figure



What is the displacement of the object?

- a) 40 m
- b) 80 m
- c) 120 m
- d) 160 m

5. Convert 1 km/hr in m/s?

- a) $2/28\ m/s$
- b) $3/19\ m/s$
- c) $5/18\ m/s$
- d) $7/12\ m/s$

6. Which among the following equation is correct?

- a) Speed = distance / time

b) Speed = time / distance

c) Speed = distance \times time

d) None of the above

7. Which among the following statement is incorrect

1) We can classify speed into two types. If a body in motion covers equal distances in equal intervals of time, then the body is said to be in uniform speed.

2) If a body covers unequal distances in equal intervals of time, the body is said to be in nonuniform speed. Average speed = time taken to travel the distance/ total distance travelled.

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

8. Which among the following equation is correct?

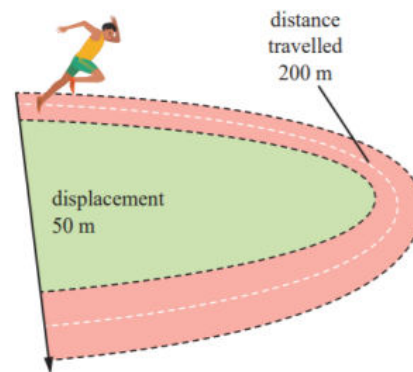
a) Velocity = speed \times displacement

b) Velocity = displacement \times time

c) Velocity = displacement/time

d) Velocity = speed / displacement

9. If an athlete in the diagram takes 25 s to complete a 200 m sprint event. Find her speed and velocity.



a) speed = 8 m/s, velocity = 2 m/s

b) speed = 4 m/s, velocity = 2 m/s

c) speed = 2 m/s, velocity = 8 m/s

d) speed = 8 m/s, velocity = 4 m/s

10. What is the SI unit of Velocity?

- a) m
- b) m s
- c) m/s
- d) m/s^2

11. A light travels through vacuum is example of which velocity?

- a) Uniform velocity
 b) Reverse velocity
 c) Non-Uniform velocity
 d) All the above

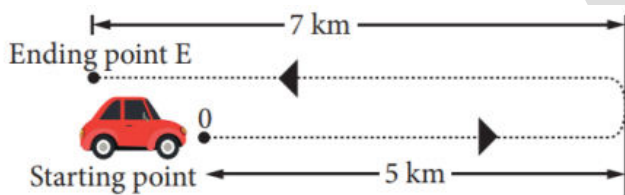
12. A train starting and moving out of the station is example of which velocity?

- a) Uniform velocity
 b) Reverse velocity
 c) Non-Uniform velocity
 d) All the above

13. Which among the following equation is correct?

- a) Average velocity = total displacement / total time taken
 b) Average velocity = average displacement / average time taken
 c) Average velocity = average speed / average time taken
 d) Average velocity = average displacement / average speed

14. Figure shows a car that travels 5 km due east and makes a U – turn to travel another 7 km. If the time taken for the whole journey is 0.2 h. Calculate the average velocity of the car.



- a) 0.17 m/s
 b) 0.28 m/s
 c) - 0.17 m/s
 d) - 0.28 m/s

15. Which among the following relation is incorrect?

- a) $v = d / t$
 b) $t = d / v$
 c) $d = v \times t$
 d) None of the above

16. Which is the rate of change in velocity?

- a) Optimization
 b) Conjunction
 c) Acceleration
 d) Polarisation

17. Which among the following equation is correct

- a) $a = (u-v) / t$
 b) $a = (v-u) / t$
 c) $a = (v-u) \times t$

d) $a = v / (u \times t)$

18. Which among the following is the SI unit of acceleration?

- a) m
 b) m/s
 c) m/s^2
 d) m s

19. A car at rest starts to travel in a straight path. It reaches a velocity of 12 m/s in 4 s. What is its acceleration. Assuming that it accelerates uniformly?

- a) 12 m s
 b) 12 m/s
 c) 3 m/s
 d) $3 m/s^2$

20. If the velocity of an object increases with respect to time, then the object is said to be in ___

- a) Retardation
 b) Just acceleration
 c) Deceleration
 d) All the above

21. If the velocity of an object decreases with respect to time, then the object is said to be in ___

- a) Retardation
 b) Deceleration
 c) Negative acceleration
 d) All the above

22. The velocity of a golf ball rolling in a straight-line change from 8 m/s to 2 m/s in 10 s. What is its deceleration, assuming that it is decelerating uniformly?

- a) $- 0.6 m/s^2$
 b) $- 2 m/s^2$
 c) $0.6 m/s^2$
 d) $2 m/s^2$

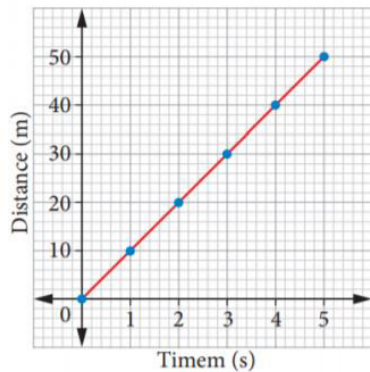
23. Which among the following statement is correct

1) An object undergoes uniform acceleration when the change (increase or decrease) in its velocity for every unit of time is the same. When the velocity of the object is increasing by 20 m/s the acceleration is 20 m/s^2 . When the velocity of the object is decreasing by 20 m/s the deceleration is 20 m/s^2 .

2) An object undergoes non uniform acceleration if the change in its velocity for every unit of time is not the same. Note that the change in velocity is same for every second. The moving object is undergoing non uniform acceleration.

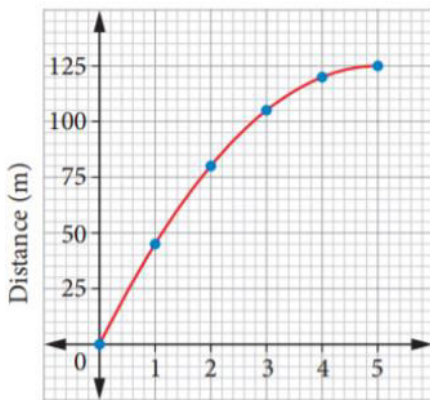
- a) Only 1
b) Only 2
c) Both 1 and 2
d) None

24. Which among the following statement is correct based on the graph?



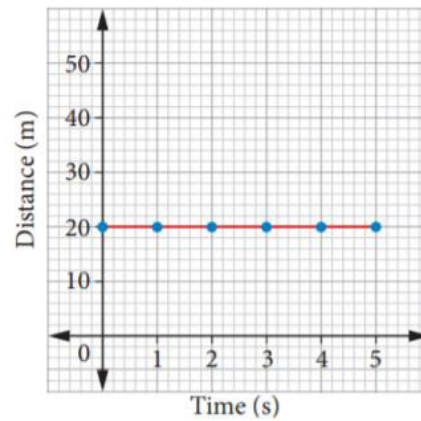
- a) The graph has zero gradient. The distance is a constant for every second.
b) The graph has a zero-constant gradient. The distance increases 10 m every second.
c) The graph has an increasing gradient. The speed increases.
d) The graph has a decreasing gradient. The speed decreases

25. Which among the following statement is correct based on the graph?



- a) The graph has zero gradient. The distance is a constant for every second.
b) The graph has a zero-constant gradient. The distance increases 10 m every second.
c) The graph has an increasing gradient. The speed increases.
d) The graph has a decreasing gradient. The speed decreases

26. Which among the following statement is correct based on the graph?



- a) The graph has zero gradient. The distance is a constant for every second.
b) The graph has a zero-constant gradient. The distance increases 10 m every second.
c) The graph has an increasing gradient. The speed increases.
d) The graph has a decreasing gradient. The speed decreases.

27. Which is the point through which the entire weight of the object appears to act?

- a) Projectile point
b) Centre conjoint
c) Centre of gravity
d) Centre of active

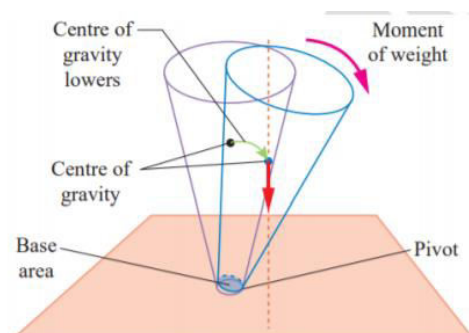
28. Which is a measure of the body's ability to maintain its original position?

- a) Stability
b) Integrity
c) Conductivity
d) Capacity

29. Which among the following is not the type of stability?

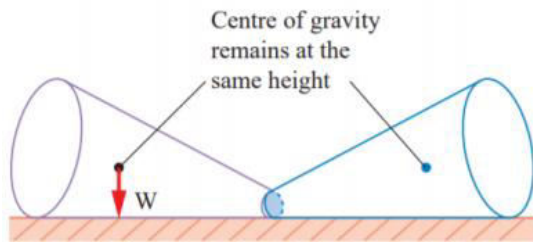
- a) Stable equilibrium
b) Unstable equilibrium
c) Neutral equilibrium
d) Retarding equilibrium

30. The following image describes which among the following stability?



- a) Stable equilibrium
- b) Unstable equilibrium
- c) Neutral equilibrium
- d) All the above

31. The following image describes which among the following stability?



- a) Stable equilibrium
- b) Unstable equilibrium
- c) Neutral equilibrium
- d) All the above

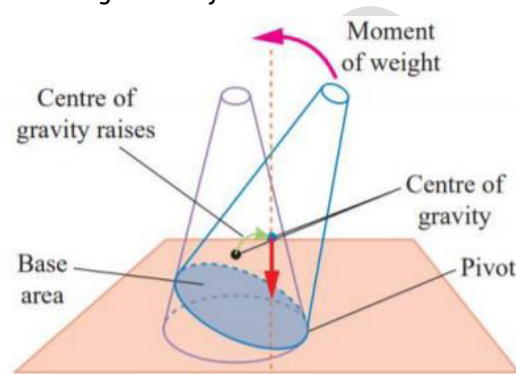
32. The Thanjavur doll is type of traditional Indian toy made of which material?

- a) Iron
- b) Copper
- c) Terracotta
- d) Ceramic

33. Which among the following is not the condition for stability?

- a) Lower its centre of gravity
- b) Lower the area of its base
- c) A heavy base lower at the centre of gravity So the box does not tip over
- d) A broad base makes the box more difficult to tip over

34. The following image describes which among the following stability?



- a) Stable equilibrium
- b) Unstable equilibrium
- c) Neutral equilibrium
- d) All the above

7th Science Lesson 3 Questions in English

3] Matter Around Us

1. Which among the following is the matter?
 - a) Heat
 - b) Light
 - c) Sound
 - d) Air
2. The graphite refill used in pencil is made up of element called _____
 - a) Copper
 - b) Carbon
 - c) Nitrogen
 - d) All the above
3. The smallest unit of an element that exhibits the properties of the element is called as _____
 - a) Dark matter
 - b) Atom
 - c) Nucleus
 - d) Positron
4. The most abundant type of atom in the universe is _____
 - a) Carbon atom
 - b) Oxygen atom
 - c) Nitrogen atom
 - d) Hydrogen atom
5. When an atom combines with another atom (or atoms) and forms a compound it is called as _____
 - a) Nucleus
 - b) Molecule
 - c) Positron
 - d) None of the above
6. Ozone is a substance that is made up of how many oxygen atoms chemically combined?
 - a) Two
 - b) Three
 - c) Four
 - d) Eight
7. Which among the following statement is correct?
 - a) Molecules also exhibit properties of matter and have individual existence.
 - b) A molecule can be formed by the same kinds of atoms
 - c) A molecule can be formed by different kinds of atoms
 - d) All the above
8. Oxygen gas in the air that we breathe is made up of how many oxygen atoms chemically combined?
 - a) Two
 - b) Three
 - c) Four
 - d) Eight
9. Which among the following is not the monatomic molecule?
 - a) Helium
 - b) Krypton
 - c) Hydrogen
 - d) Neon
10. Which among the following molecule is not diatomic molecule?
 - a) Oxygen
 - b) Carbon dioxide
 - c) Hydrogen
 - d) Nitric oxide
11. Which among the following is not polyatomic molecule?
 - a) Phosphate
 - b) Ozone
 - c) Sulphur
 - d) None of the above
12. In which among the following state each molecule of water consists of one oxygen atom and two hydrogen atoms remain in this ratio?
 - a) Liquid
 - b) Solid
 - c) Gaseous
 - d) All the above
13. Which among the following is not triatomic molecule?
 - a) Ozone
 - b) Sulphur dioxide
 - c) Carbon dioxide
 - d) None of the above
14. Which is an element that occurs naturally combined with other elements to make medicine for treating diarrhoea?
 - a) Lead
 - b) Polonium

- c) Bismuth
d) Tin
15. matter is classified into how many types?
a) Two
b) Three
c) Four
d) Six
16. Which among the following element is not present in common salt?
a) Sodium
b) Bromine
c) Chlorine
d) None of the above
17. Which among the following element is not used for making crackers?
a) Magnesium
b) Sodium
c) Phosphorous
d) None of the above
18. Which among the following is used as manure in agriculture?
a) Sodium
b) Chlorine
c) Sulphur
d) Bromine
19. Which among the following element is used for making computer chips?
a) Cadmium
b) Sulphur
c) Silicon
d) Fluorine
20. How many known elements are there till date?
a) 108
b) 112
c) 118
d) 124
21. Elements can be broadly classified into how many types based upon their chemical properties?
a) Two
b) Three
c) Four
d) Five
22. In 118 known elements how many elements occur naturally?
a) 82
b) 86
c) 90
d) 94
23. Which among the following metal is soft?
a) Calcium
b) Sodium
c) Tin
d) Zinc
24. Which among the following is the only metal that is liquid at room temperature?
a) Mercury
b) Nickel
c) Magnesium
d) Zinc
25. Which among the following statement is correct
1) We have tools, utensils and jewellery made from silver, copper, iron, gold, Aluminium. Using pressure like hammering or rolling we can deform these materials into various shapes. Such elements that are malleable (a material may be flattened into thin sheets or various shapes) is called as metals.
2) Metals are generally hard and shiny elements. Metals are malleable, can be bent or beaten into sheets. They can be drawn into wires. They are good conductors of heat and electricity. Copper, Lead, tin, nickel, iron, zinc, gold, magnesium and calcium are examples of metals.
a) Only 1
b) Only 2
c) Both 1 and 2
d) None
26. Which among the following is shiny and also the hardest natural substance on earth?
a) Gold
b) Platinum
c) Copper
d) Diamond
27. Which among the following Non-metal is not solid at room temperature?
a) Chlorine
b) Carbon
c) Iodine
d) Sulphur
28. Which is the only non-metal that is liquid at room temperature?
a) Graphite

b) Iodine

c) Radon

d) Bromine

29. Which among the following Non-metal is a good conductor of electricity?

a) Krypton

b) Graphite

c) Radon

d) None of the above

30. Which among the following is not the example of Metalloids?

a) Silicon

b) Fluorine

c) Arsenic

d) Boron

31. Which is a pure substance that is formed when the atoms of two or more elements combine chemically in definite proportions?

a) Nucleus

b) Positron

c) Compound

d) Mixture

32. Which among the following statement is correct

1) Compounds exhibit properties entirely different from the properties of their constituent elements. For example, the atoms of the elements hydrogen and oxygen combine chemically in a fixed ratio to form the compound water.

2) However, water does not have the exact same properties as hydrogen and oxygen. For example, at room temperature water exist as liquid while hydrogen and oxygen exist as gases. Also, oxygen supports fire whereas water is used as a fire extinguisher.

3) Similarly, common salt (sulphur chloride) is a compound made up of elements sulphur and chlorine. It is used in our food, whereas sulphur and chlorine are poison, are both unsafe for consumption.

a) Both 1 and 2

b) Both 1 and 3

c) Both 2 and 3

d) All 1, 2 and 3

33. Which among the following is the property of compounds?

1) A compound is formed when the constituent elements combine in a fixed or various proportion.

The properties of a compound are different from those of its constituent elements. A compound cannot be separated into its constituent elements by chemical methods also.

2) A compound cannot be broken down by physical methods. This is because a compound is made up of different elements that are chemically combined. Sodium chloride cannot be separated by physical methods such as filtration.

a) Only 1

b) Only 2

c) Both 1 and 2

d) None

34. Which among the following is not property of metal?

1) Metals are lustrous. They have a shiny surface generally hard and bendable. Most metals can be bent, beaten into sheets and they can draw into wires.

2) Most metals are good conductors of electricity and heat. Most metals are making ringing sound when struck. Hence, they are used to make objects like bells.

a) Only 1

b) Only 2

c) Both 1 and 2

d) None

35. The symbol is usually derived from the name of the element, which is either in English or ___

a) French

b) Greece

c) Latin

d) German

36. The symbols of an element are allocated by whom?

a) ISO

b) IUPAC

c) WMO

d) WTO

37. Who was the first scientist to use the symbols for elements in a very specific sense?

a) J J Thomson

b) Rutherford

c) Niels Bohr

d) Dalton

38. Which among the following is the property of non-metal?

1) Non-metals are non-lustrous. They have non-shiny surface, generally soft and non-bendable. Non-metals are non-ductile.

2) Non-metals are bad conductors of electricity and heat. Non-metals does not make any sound when they struck.

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

39. Who suggested that the symbols of elements be made from one or two letters of the name of the element?

- a) Berzelius
- b) Lavoisier
- c) John Dalton
- d) Cannizzaro

40. Which among the following statement is correct about assigning symbol to an element?

1) Chemical symbols usually consist of one or two letters. The symbols of most elements correspond to the first letter (which is capitalized) of their English name. For example, the symbol for oxygen is "O" and that for hydrogen is "H".

2) When there is more than one element that begins with the same letter, their symbols take two letters. The first letter is capitalised while the second letter also capitalised. For example, the names of both hydrogen and helium begin with H. So, hydrogen is represented by the symbol H and Helium by HE.

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

41. Which among the following is the symbol of chromium?

- a) Ca
- b) Ch
- c) Cr
- d) Cl

42. Which among the following is the symbol of gold?

- a) Go
- b) Gi
- c) Au
- d) Ts

43. The symbols for copper is Cu after its Latin name -----

- a) Cuprum
- b) Cullender
- c) Currach
- d) Cumulus

44. The name copper was taken from which place name?

- a) Cuenca
- b) Cuzco
- c) Cyprus
- d) Cordoba

45. Which among the following statement is correct

1) Often, we hear that water is H₂O. This is the chemical formula for water molecule. This means that each molecule of water has two hydrogen atoms combined with one oxygen atom. A chemical formula is a symbolic representation of one molecule of an element or a compound.

2) It provides information about the elements present in the molecule and the number of atoms of each element. The chemical formula tells us the types of atoms and the number of each type of atom in one molecule of substance.

3) In water (H₂O) there are 2 hydrogen atoms in water molecule and 1 oxygen atom in water molecule. In Sodium Chloride (NaCl) 1 atom of Sodium and 1 atom of chlorine. In Ammonia (NH₃) 1atom of Nitrogen and 3 atoms of Hydrogen.

- a) Both 1 and 2
- b) Both 1 and 3
- c) Both 2 and 3
- d) All 1, 2 and 3

46. Which among the following is the chemical formula of Glucose?

- a) CH₄
- b) C₆H₁₂O₆
- c) C₂H₄
- d) CH₃OH

47. In chemistry we usually understand what to imply the total number of atoms present in one molecule of an element, compound or a substance?

- a) Atomicity
- b) Autonomy
- c) Atomiser
- d) Atomiton

48. Which among the following statement is incorrect

- 1) Let us see how to calculate the atomicity of elements. For example, Oxygen exists as a diatomic molecule which means that a molecule of oxygen contains two atoms hence its atomicity is 2.
 - 2) Similarly, a phosphorus (P_5) molecule contains 5 atoms; a sulphur (S_8) molecule contains 8 sulphur atoms. Hence their atomicity is 5 and 8 respectively.
- a) Only 1
 - b) Only 2
 - c) Both 1 and 2
 - d) None

49. What is the atomicity of Sulphuric acid?

- a) 6
- b) 7
- c) 8
- d) 4

50. Match the following compounds with its respective chemical formula?

- i. Ethanol – 1. NH_3
- ii. Methane – 2. C_2H_6O
- iii. Sucrose – 3. $C_{12}H_{22}O_{11}$
- iv. Ammonia – 4. CH_4

- a) 3 – 2 – 4 – 1
- b) 2 – 4 – 3 – 1
- c) 1 – 3 – 2 – 4
- d) 3 – 1 – 2 – 4

51. The molecules of which two different elements, make up about 99% of the air?

- a) Hydrogen and Oxygen
- b) Hydrogen and Nitrogen
- c) Nitrogen and Oxygen
- d) Oxygen and Helium

52. Which is the life-giving element in the air?

- a) Carbon dioxide
- b) Helium
- c) Methane
- d) Oxygen

53. Who is the first scientist who used the term element?

- a) Robert Boyle
- b) Antoine Lavoisier
- c) Robert Hooke
- d) John Dalton

54. When solid is heated, the particles gain energy and vibrate vigorously. The particles move slightly further apart from one another. This causes the volume of matter to increase. This process is called ?

- a) Conservation
- b) Separation
- c) Expansion
- d) All the above

55. When air inside the hot air balloon is heated with a burner, it expands. The expansion causes the density of the air inside the balloon to _____

- a) Increase
- b) Decrease
- c) Remains same
- d) None of the above

56. Which among the following statement is correct

1) During heating or expansion, the mass of matter does not change. This is explained in the following way. During heating, the distance between the particles of the iron lock changes. Mass is conserved when matter expands. Although, the volume of the matter changes, the size and number of the particles of matter do not change.

2) Hence, during heating, the mass of a matter is conserved. For example, in an iron lock the distance between the iron particles decreased when they gain enough heat. However, the number of iron particles does not change. Hence the mass of the iron lock is conserved.

3) The melting of ice is an example of a change in the states of matter. The change in the states of matter occurs during melting, boiling and freezing and condensation. When the particles possess enough energy, they overcome the strong forces of attraction between one another. The particles break free from one another and move randomly.

- a) Both 1 and 2
- b) Both 1 and 3
- c) Both 2 and 3
- d) All 1, 2 and 3

57. At what temperature the liquid water is heated, it boils to become steam?

- a) 560 C
- b) 720 C
- c) 890 C
- d) 1000 C

7th Science Lesson 4 Questions in English

4] Atomic Structure

1. What is an average diameter of atom?
 - a) 1×10^{-2} m
 - b) 1×10^{-4} m
 - c) 1×10^{-7} m
 - d) 1×10^{-10} m
2. Who proposed the atomic theory in the year 1808?
 - a) Rutherford
 - b) Chadwick
 - c) John Dalton
 - d) J. J. Thomson
3. One nanometre is equal to _____
 - a) 1×10^{-9} m
 - b) 1×10^{-10} m
 - c) 1×10^9 m
 - d) 1×10^{10} m
4. John Dalton proposed atom is smallest indivisible particle and in what shape?
 - a) Cylindrical
 - b) Square
 - c) Spherical
 - d) Trapezium
5. Who proposed different atomic theory in 1897 and compared an atom to a watermelon?
 - a) Rutherford
 - b) Chadwick
 - c) J. J. Thomson
 - d) Goldstein
6. Which among the following statement is correct
 - 1) J. J. Thomson theory proposed that the atom has negatively charged part like the red part of the watermelon and in it are embedded, like the seeds, positively charged particles which he called protons.
 - 2) According to this theory as the positive and negative charges are equal, the atom as a whole does not have any resultant charge. Thomson's greatest contribution was to prove by experimentation the existence of the negatively charged particles or electrons in an atom.
 - a) Only 1
 - b) Only 2
 - c) Both 1 and 2
 - d) None
7. Who conducted an experiment bombarded a very thin layer of gold with positively charged alpha rays?
 - a) J. J. Thomson
 - b) Goldstein
 - c) James Chadwick
 - d) Rutherford
8. Which among the following statement is correct
 - 1) Rutherford bombarded a very thin layer of gold with positively charged alpha rays. He found that most of these rays which travel at a great velocity passed through the gold sheet without encountering any obstacles. A few are, however, turned back from the sheet.
 - 2) Based on this experiment, Rutherford proposed his famous theory. In his opinion, – The fact that most alpha particles pass through the gold sheet means that the atom consists mainly of electron in it.
 - 3) The part from which the positively charged particles are turned back is positively charged but very small in size as compared to the empty space.
 - a) Both 1 and 2
 - b) Both 1 and 3
 - c) Both 2 and 3
 - d) All 1, 2 and 3
9. Which among the following is not the theory proposed by Rutherford
 - a) The nucleus at the centre of the atom has the positive charge.
 - b) Most of the mass of the atom is concentrated in the electrons.
 - c) The negatively charged electrons revolve around the nucleus in specific orbits.
 - d) In comparison with the size of the atom, the nucleus is very, very small.
10. Which among the following is not the Subatomic Particle?
 - a) Proton
 - b) Electron
 - c) Nucleus
 - d) Neutron
11. Which among the following particle is present in nucleus?
 - a) Only proton

- b) Proton and Electron
c) Only Electron
d) Proton and Neutron
12. Which revolve around the nucleus of the atom in specific orbits?
a) Proton
b) Electron
c) Positron and proton
d) Both proton and neutron
13. The nuclei of all atoms contain neutrons except which one?
a) Hydrogen
b) Oxygen
c) Nitrogen
d) Helium
14. Protons and Neutrons are the two types of particles in the nucleus of an atom. They are called -----
a) Positrons
b) Nucleons
c) Magnetron
d) None of the above
15. Which among the following statement is correct
a) The total negative charge of all an electron outside the nucleus is less than the total positive charge in the nucleus.
b) The total negative charge of all an electron outside the nucleus is equal to the total positive charge in the nucleus.
c) The total negative charge of all an electron outside the nucleus is more than total positive charge in the nucleus.
d) The total negative charge of all an electron outside the nucleus where there is only one positive charge in the nucleus.
16. Which among the following particle is not correctly matched with its scientist who discovered?
1) Proton – Dalton
2) Electron – J. J. Thomson
3) Neutron – Rutherford
a) Only 1
b) Both 1 and 2
c) Both 1 and 3
d) All 1, 2 and 3
17. What is the mass of proton?
a) 1.5298×10^{-27} kg
b) 1.6726×10^{-27} kg
c) 4.8173×10^{-27} Kg
d) 9.1093×10^{-27} kg
18. What is the mass of Electron?
a) 1.6749×10^{-31} kg
b) 3.761×10^{-31} kg
c) 4.8173×10^{-31} Kg
d) 9.1093×10^{-31} kg
19. The number of electrons or protons in an atom is called -----
a) Mass number
b) Atomic number
c) Nuclei number
d) All the above
20. What is the mass of neutron?
a) 1.6749×10^{-27} kg
b) 3.761×10^{-27} kg
c) 4.8173×10^{-27} Kg
d) 9.1093×10^{-27} kg
21. The Atomic number is represented by which letter?
a) A
b) Z
c) T
d) M
22. What is the atomic number of Oxygen?
a) 4
b) 6
c) 8
d) 12
23. Which is equal to the sum of the number of protons(p) and neutrons (n) in the nucleus?
a) Mass number
b) Atomic number
c) Nuclei number
d) All the above
24. The mass of an atom is concentrated in what?
a) Neutron
b) Positron
c) Nucleus
d) Electron
25. The mass number is represented by which letter?
a) A

- b) Z
c) M
d) T
26. What is the atomic mass number of Lithium (3 Protons and 4 neutrons)?
a) 1
b) 7
c) 9
d) 12
27. Atoms that have the same mass number but different atomic numbers is known as ____
a) Isotopes
b) Isobars
c) Isometrics
d) Isotonic
28. In a sodium atom, there are 11 Protons and 12 neutrons. What is the atomic mass?
a) 11
b) 12
c) 23
d) 1
29. Atoms that have same atomic number but different mass numbers is known as ____
a) Isotopes
b) Isobars
c) Isometrics
d) Isotonic
30. In Nitrogen (${}^7\text{N}14$) which is the atomic number?
a) 7
b) 14
c) 21
d) None of the above
31. Which among the following element is not correctly matched with its mass number?
a) Hydrogen – 1
b) Helium – 4
c) Aluminium – 12
d) Oxygen – 16
32. If the atomic number of sodium is 11 and mass number is 23, then what is the number electron in sodium atom?
a) 11
b) 12
c) 34
d) 5
33. Some atoms can hold one electron, some can hold two, some can hold three, some can hold four and some cannot hold any electron. This property is called _____
a) Isotone
b) Fusion
c) Barrer
d) Valency
34. Valency of an atom is measured by its combining property with which among the following atoms?
a) Helium
b) Hydrogen
c) Lithium
d) Oxygen
35. What is the valency of Oxygen?
a) One
b) Two
c) Three
d) Four
36. In chlorine, it combines with how many hydrogen atoms to create Hydrochloric acid?
a) One
b) Two
c) Three
d) Four
37. Methane has one carbon atom combining with how many hydrogen atoms?
a) One
b) Two
c) Three
d) Four
38. Which among the following statement is correct
1) Valency is defined as the combining capacity of an element. Atoms of different elements combine with each other to form molecules. Valency determines the number of atoms of an element that combines with atom or atoms of another type.
2) Electrons carry a negative electric charge, and protons carry a positive charge. The attraction between them holds electrons in orbits.
a) Only 1
b) Only 2
c) Both 1 and 2
d) None
39. Which among the following is the Monovalent?

- a) Sodium
b) Oxygen
c) Beryllium
d) Calcium
40. Which among the following element is present in Banana?
- a) Carbon
b) Helium
c) Potassium
d) Argon
41. Which among the following is not the divalent?
- a) Nitrogen
b) Beryllium
c) Oxygen
d) Calcium
42. Which among the following is used to fill the balloons that float?
- a) Lithium
b) Helium
c) Neon
d) Fluorine
43. Which among the following is used in crackers and match sticks?
- a) Neon
b) Fluorine
c) Carbon
d) Phosphorous
44. Which among the following statement is incorrect
- 1) When atoms of different elements combine with each other than molecules of compounds are formed. In these instances, it is necessary to know the valency of those elements. For example: $2 \text{Na} + \text{Cl}_2 \text{-----} 2\text{NaCl}$
Valency 1 + 1
- 2) Here, the valency's of both sodium and chlorine are 1. Remember The valency of element Na is 1 The valency of element Cl is 1 Then, the molecular formula will be Symbol of Elements NaCl Molecular Formula; Radicals and ions = 1 and 1.
- a) Only 1
b) Only 2
c) Both 1 and 2
d) None
45. Which among the following is the trivalent?
- a) Aluminium
b) Carbon
c) Hydrogen
d) Calcium
46. In $\text{Mg} + \text{Cl}_2 \rightarrow \text{Mg Cl}_2$. What is the valency of Mg?
- a) 1
b) 2
c) 4
d) 3

Answer Key

1. Measurement																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	C	D	B	C	D	B	D	B	C	D	C	B	D	C	C	A	D	B	C
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C	D	B	B	D	A	A	B	C	C	A	A	C	B	C	A	B	B	C	B
41	42	43	44	45	46														
A	B	B	C	D	B														
2. Force and Motion																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	B	A	A	C	A	B	C	A	C	A	C	A	D	D	C	B	C	D	B
21	22	23	24	25	26	27	28	29	30	31	32	33	34						
D	A	A	B	D	A	C	A	D	B	C	C	B	A						
3. Matter Around Us																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	B	B	D	B	B	D	A	C	B	B	D	D	C	A	B	B	C	C	C
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
B	D	B	A	C	D	A	D	B	B	C	C	B	D	C	B	D	C	A	A
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57			
C	C	A	C	D	B	A	B	B	B	C	D	A	C	B	B	D			
4. Atomic Structure																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	C	A	C	C	B	D	B	B	C	D	B	A	B	B	C	B	D	B	A
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
B	C	B	C	A	B	B	C	A	B	C	A	D	B	B	A	D	C	A	C
41	42	43	44	45	46														
A	B	D	D	A	B														
5. Reproduction and Modification in Plants																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	B	B	C	A	B	B	D	C	A	D	B	B	A	A	C	C	C	B	D
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
D	B	D	C	A	C	C	C	B	B	D	C	D	B	C	A	B	D	B	A
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
D	B	A	B	A	B	D	B	B	C	D	B	D	D	D	A	B	D	C	B
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75					
A	B	C	A	A	B	B	C	D	A	D	C	D	D	B					
6. Health and Hygiene																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	C	B	D	B	B	D	C	D	B	A	C	A	C	B	C	C	D	C	D
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C	D	A	A	C	A	B	C	B	B	B	A	C	D	D	C	A	B	B	B
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
D	D	C	C	D	B	A	C	D	C	C	D	B	B	A	B	C	B	A	D
61	62	63																	
B	A	B																	
7. Heat and Temperature																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

C	D	D	C	C	C	B	C	C	C	D	C	C	B	D	A	C	A	C	C
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37			
D	C	A	B	B	C	D	A	C	A	D	B	B	C	A	A	B			
8. Electricity																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	B	C	D	C	D	A	A	C	D	D	C	B	A	C	B	B	B	C	A
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A	B	D	A	D	C	C	C	A	D	C	D	A	A	A	C	B	C	B	C
41	42	43	44	45	46	47	48	49	50	51	52	53	54						
C	B	C	D	D	B	D	C	B	D	C	D	B	C						
9. Changes Around Us																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	D	C	C	D	B	B	B	C	D	C	C	D	D	D	B	B	B	B	D
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A	C	D	C	C	A	B	A	B	C	D	C	B	D	D	B	B	B	B	A
41	42	43	44	45	46	47	48	49	50	51	52	53	54						
B	D	C	B	C	A	A	A	C	C	A	A	D	D						
10. Cell Biology																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C	B	B	D	C	D	C	D	A	D	C	D	C	D	C	D	D	D	B	D
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
B	A	B	C	B	C	C	C	A	D	C	C	A	C	D	B	C	A	D	
11. Basis of Classification																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	D	D	C	B	D	C	C	D	D	B	D	A	A	B	C	D	A	B	B
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C	C	B	B	B	D	A	C	C	D	B	D	C	D	A	A	C	D	D	A
41	42	43	44	45	46	47													
C	B	D	B	D	B	A													
12. Light																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	C	D	A	B	A	A	A	C	C	C	A	A	A	A	C	D	C	A	A
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A	A	A	A	D	A	B	A	A	D	C	A	A	C	B	C	C	A	A	B
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A	A	A	D	B	C	A	A	B	D	C	A	A	A	B	C	B	A	C	A
61	62	63	64	65															
A	A	A	D	B															
13. Universe and Space																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D	A	A	D	C	D	C	A	B	C	A	C	A	C	A	B	D	A	B	C
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
B	A	A	D	A	A	C	A	D	A	D	A	B	B	D	A	A	A	D	D
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A	A	D	B	D	B	A	C	C	A	A	A	D	C	A	C	A	C	A	A
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
D	A	A	A	B	D	A	D	A	D	B	D	C	B	D	B	C	C	A	C

81	82	83	84	85															
A	C	A	A	A															
14. Polymer Chemistry																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	C	A	A	C	C	C	D	B	A	C	D	A	C	D	A	D	D	A	C
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
C	C	C	A	D	A	D	A	D	B	C	A	D	D	D	A	D	B	A	A
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A	A	B	D	D	D	A	D	B	B	B	D	D	D	A	C	A	D	C	C
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
A	A	C	A	A	D	A	D	A	C	A	A	B	C	A	D	C	D	A	A
15. Chemistry in Daily Life																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	A	C	B	B	C	D	B	D	D	A	B	D	C	C	A	D	D	B	D
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
D	B	B	C	A	A	B	A	B	A	B	D	A	C	D	D	C	A	B	D
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
C	D	A	D	B	C	B	A	A	B	B	B	C	C	B	B	C	C	B	A
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
A	B	B	D	D	A	D	B	C	A	B	C	B	D	D	C				
16. Animals in Daily Life																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C	C	A	B	C	A	D	B	B	A	B	B	C	A	C	B	D	D	D	A
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
D	A	D	A	C	B	C	C	A	C	C	D	D	A	B	C	A	D	D	C
41	42	43	44	45	46	47	48	49	50										
A	C	A	D	B	C	B	A	C	C										