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General Science and ability

Q No 4: (a)

Explain the Rock cycle.

Rocks are the strongest composition of materials. Which do not easily break. It is also the part of earth but it is completely different from the soil of earth due to its composition. It is harder than sand and soil. There are three types of rock. These three types are called igneous, sedimentary and metamorphic.

Igneous Rock:

This is less hard than sedimentary and metamorphic rock because the bond between igneous rock is weak. It is mostly used in temporary low purpose due to its weakness.

Sedimentary Rock.

It is more stronger than igneous but less stronger than metamorphic rocks. Its composition is stronger because the bond in sedimentary rocks are stronger than igneous rocks.

metamorphic rock.

It is much harder, stronger than all igneous rocks. Its kinds are strange.

It is mostly used in building construction due to its hardness and strength. For example, marble and granite.

Q No 4 (B)

Acid Rain:

When harmful gases emit from their sources and move towards atmosphere. Atmosphere is already the mixture of Nitrogen (78), Oxygen (21) and ^{other} trace gases (1). So, these harmful gases pollute the atmosphere. However, normal rain changes into acid rain when rain water passes from the dirty gases. Therefore, this acid rain disturbs the lives of animals and plants on the earth surface. even artificial things destroy. So, it is dangerous for all things as well as animals. The main cause of acid rain is the gases emitted from electrical sector and industrial sector.

Discuss the chemical cycle or reactions involved in its formation and its harmful effects on aquatic life and vegetation?

Sulphur dioxide, Carbon dioxide, Nitrous oxide and methane which emit from the man made activities ^{or} pollute the atmosphere. However, this polluted environment in atmosphere combined with the water of rain. Therefore, normal rain change into acid rain which is dangerous for all biotic and a biotic organisms on ^{the} earth surface. So, this acid rain destroys the aquatic as well as vegetable on the earth surface.

How acid rain affects aquatic and vegetation life.

Aquatic is the life in water. Many living organism live in water. This acid rain is harmful for all living organism in water. Acid rain when falls in the water, the oxygen ~~ratio~~ becomes decrease.

Secondly, The environment is water change into denguous for all species. On the other hand. Acid rain destroys plants. Plants is necessary because it provide oxygen to animals. So, vegetables and other plants destroy due to acid rain because it destroys the leaves, branches and vascular bundles of plants.

Q No (4) (C)

Discuss what is Remote Sensing and (GIS) in environmental monitoring and disaster management?

What is Remote Sensing Role.

Remote Sensing is a device in which remote is used to carry the functions of specific machine.

It is most useful modern device which is used to control the things from distance.

- i) It is using for defence purpose because in which person can derive it from ^{some} distance.
- ii) It is used for attack purpose from some distance.

(iii) Some remote sensing devices are working and performing the activities and functions of human.

(iv) Summarisingly, remote sensing device is time saving for humans.

The Role of GIS in environmental monitoring and disaster management.

Geographic Information System in environmental monitoring.

Geographic information system is used to take the information at specific time as well as specific location. Therefore, it is also used to monitor the environmental condition because it provides information about environmental enemy factors. However, preplanning ~~can~~ be taken to monitor the environment. It also tells about typhoons, tsunamis and cyclons. So, preplanning ~~can be taken for~~

the protection of human against disasters.

Geographic information system is disaster management.

It tells about the future natural disasters because it access the information at specific location. floods, avalanches, tsunomies and cyclones are access in geographic information system. So, it is useful for future informations because special measure can be taken against disasters.

Q No 4 D)

Solid waste management.

Solid waste management is a process in which polluted, dangerous and harmful solid material ~~Passes~~ from recycling, renewing and monitoring because it cannot harm the living organisms.

It is necessary for friendly environment.

Collecting:

It is the first step which is used in solid waste management because solid waste material collection is necessary for further process.

Recycling:

It is second step in solid waste management and it is main step because all polluted material passes in cleaning process.

Reusing

It is the last step in which purified and cleaned material comes into markets and again passes through the human uses.

Environmental hazards associated with improper disposal of urban management.

Improper solid waste management is the main reason behind polluted environment because improper disposal of waste management emits harmful gases which disturb the environmental condition. However, many

diseases born due to improper urban solid management which can be pandemic as well as epidemic.

Therefore, these diseases transfer into other humans due to environmental air. So, improper waste management leads to environmental enemy, as well as many diseases.

Q No 5 (A)

What is Balanced diet.

Balanced diet is the mixture of five ingredients in food which are necessary for human health.

When food contain milk, beans, ~~meats~~ cereal group and vegetables.

This is called balanced diet.

Balanced diet is necessary because human body grow only by balanced diet. When diet does not

contain these five ingredient this is called deficient diet. On

the other hand, if these five ingredients increased in human

body than this diet will be called excessive diet. Both the excessive and deficient diet are harmful for human body. Only balanced diet is sufficient for human health.

"Let thy food be thy medicine"

The Function of Carbohydrates in human body.

- (i) Carbohydrates provide energy to human body.
- (ii) It grows the human brain.
- (iii) It provides sugar to human body.
- (iv) It grows the human tissues.

The function of proteins in human body.

- (i) Proteins carry human metabolic activities as well as metabolic reactions.
- (ii) It provides sufficient ingredients to human body which are necessary for human survival.
- (iii) It carries out chemical reactions in human body.

Q No 5) (B)

Food Preservation.

Food Preservation is the process in which food is preserved from harmful bacteria, fungi and algae. When food remains for hours the condition of food gradually changes due to bacteria and fungi.

So, Food Preservation is a method which is used to protect the food for human safety. There are several methods which are used for the protection of food.

Pasteurization method for preservation of food

It is the method in which **few** chemicals are used for the protection of food. These chemicals kill the algae and fungi and protect the food against harmful organisms.

It is mostly used to preserve the meat and solid soft food.

Canning process to Preserve the food.

It is another process which is used for the preservation of food. It is the process in which food is kept in cold places because many harmful organisms cannot grow in cold environment. So it is another method to preserve the food.

(Q No 5) C

What is the Internet of thing.

Internet of the thing are those devices which can use internet. The devices which perform their function by using internet are called the internet of thing.

~~These~~ devices are more useable in this modern time because internet is the need of many people.

These things ~~have~~ proved more helpful for human because it ~~has~~ become the easy life of human.

How IoT is using in Business and daily life.

Internet of thing is using in Business.

Organizations are using Internet of thing to carry their functions. Internet has become the important factor for these functions. However, local area network and Metropolitan are network is using with every organization to carry their functions. Therefore, Human Business is depending on internet devices.

Internet of thing in daily life.

Mobile Phone is the device which carry some functions by using internet. Therefore, WhatsApp, Facebook and some games cannot function without internet. These are the common activities of man.

(Q No 5) (D)

Differentiate between RAM and ROM.

RAM:

Ram is the temporary memory because after shutdown of the computer it can not display data. So it is called volatile memory.

(i) It is mostly less than rom in device and volatile memory.

(ii) Ram memory is necessary for the quick function of mobile phone and computer.

(iii) It maintains the speed of mobile and computers at heavy internet signals.

(iv) It is called random access memory.

ROM:

It is called read only memory. It is permanent memory and non-volatile memory.

It is mostly larger than ram and contains more data than ram.

It is necessary to store the

move data in device.

It remains when computer
shut down.

CPU:

It is called Central
Processing unit. It performs the
all function in computer because
many important machinery driving
system are included with it.

Mother board which control the
all functions in computer is
present in Central Processing
Unit. The data displays on
computer is due to the function
of Central Processing unit.

A computer cannot work without
the working of Central Processing
unit.

ALU and CU.

ALU is called algorithm
unit which algorithm data in
computer. This algorithm data
is called binary data which

Consists on digits and number.
So, Algorithm control numerical
function in computer.

Control unit

It is the part of
central processing unit which
control the all functions in
computer. So, without control
unit computer device cannot
work.

Part 2

Q No 7 @ MATH

Total Survey of people = 100

Man who watch cricket = 65

Man who watch hockey = 40

Man who watch neither = 20

How many people who watch
both cricket and hockey = ?

Cricket man + hockey man

$$65 + 40 = 105$$

Cricket + hockey - neither = 0

$$105 - 20 = 85$$

85 man watch both cricket
and hockey.

B)

Length of the Swimming Pool = 4 × width

Perimeter of the Pool = 72 meter

Uniform depth of water = 2.5 meter

What is the volume of the Swimming Pool =

$$\text{Volume} = l \times w \times h$$

$$\text{Volume} = 20 \times 16 \times 2.5 \text{ meter}$$

$$\text{Volume} = 800 \text{ meter}$$

So, The volume of the Swimming Pool will be 800 meter.

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one Train leaves Station city A = 8 AM

with 60 km/hr speed toward city B

second train leaves city B = 8 AM

with 40 km/hr speed toward city A

if the distance is 400 km what

time will the two trains meet?

train A will cover 240 km distance

and train B will cover 160 km distance

in 4 hours.

So after the 4 hours Both the train will meet with each other

4 hour

D)

Sum of ^{present} age of Father and Son = 75y

10 year ago Father age = 4 x Son age

what is the current age = ?

$$75 - 20 = 55$$

Ten year ago the age of son

$$\text{was } 11 \text{ year} = 11 + 11 \times 4$$

$$10 \text{ year ago of Both} = 11 + 44$$

Sum of age 10 year ago = 55 year old

after passing of 10 year.

$$55 + 10 \text{ of Father age} = 65$$

$$65 + 10 \text{ of Son age} = 75$$

$$60 = 11 + 10 = 21$$

21 is the current age of ^{the} Son

54 is the current age of ^{the} Father =

$$(21 + 54) = 75 \text{ year}$$

$$\text{Son} + \text{Father} = 75 \text{ y}$$

Q No 10 : (A)

if ROAD is coded in UQDGN
what would be LAKE?

LAKE would be called
OCNH after coding

OCNH

b)

The son of her sister husband's = Nephew

The nephew of the man relates to the woman = Husband

Husband ^{called} son = woman son

So, the woman is the wife of man's nephew.

g

(i) 4, 12, 6, 18, 9, 27, 13, 39

(ii) 1, 2, 6, 24, 120, 720

(d)

^{tallest} ① ^② ^③ ^④ ^{⑤ shortest}
T S Q R R $\Rightarrow$

Shortest person is 150cm tall

tallest person is 180cm tall

(Q) will be called 3rd tallest because
is taller than all other two.

$$\text{Range} = 180 - 150 = 300\text{cm}$$

$$\text{Range} = 300\text{cm}$$