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NOA CSS 2023-24

GSA MOCK

Q.No 3
(a)

1. Introduction

Climate change and global warming is a global issue. World climate change rapidly due to the increasing amount of activities by humans on earth. Earth temperature is increasing now very fast 2023 was the hottest year according to Asian Development Bank. However developing countries are facing continuous challenges to deal with climate change. Funding is the most one which is facing by developing countries. In addition, shifting to renewable energy, transition from coal power plants, and reduce cooling emissions are also significant challenges. 2023 year was also marked by

Conference of All Parties (COP)28 on Climate Change. COP28 took various decisions to tackle the challenges of developing countries such as loss and damage fund, coal transition pledge and declaration to triple global renewable energy by 2050.

2. Conference of All Parties COP28

COP28 attended by 197 countries in UAE where countries gathered to adopt strict measures to tackle the issue of global warming and climate change.

3. Hurdles in Developing Countries to tackle the impacts of Global Warming

a. Funding due to poor economy

According to UN2018, developing countries are required huge amount of funding approximately \$217 billion to \$330 billion to tackle climate change effects. Cop28 took initiative of loss and damage fund

established to fund developing countries to tackle climate change.

b. Transition from coal Power Plants

Developing countries facing another challenge to how to shift from coal power plants. Coal power plants are expensive and polluted the environment. COP28 adopt declaration to assist developing countries to transition from coal power plants for energy production.

c. Use of Renewable Energy Resources

Energy production is carried out by non-renewable energy resources in most of the developing countries. COP28 adopt the global declaration to triple global renewable energy production by 2050 and assist developing countries to adopt renewable energy resources than the non-renewable energy resources.

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4. Conclusion

Developing countries are facing challenges in terms of funding transition from coal power plants and usage of renewable energy sources to maximum capacity. COP28 took initiatives loss and damage fund, and global pledges to help vulnerable countries.

b.

Balanced Diet

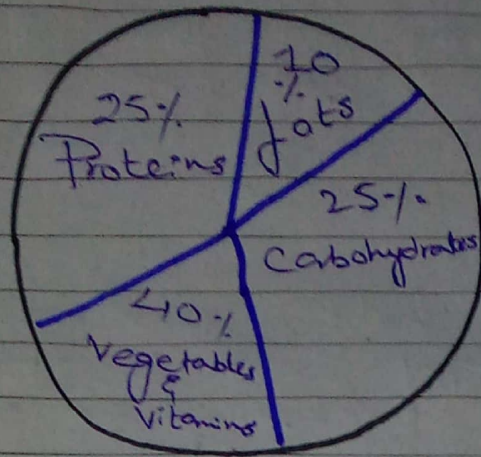
1. Introduction

Diet plays an important role in the human body to maintain physical and normal functioning of the human body. It is essential for smooth functioning of the body that diet must contain all the essential nutrients. A balanced diet contains all the essential nutrients for body growth.

2. Components of Balanced Diet

Balanced diet contains the minerals, vitamins, Carbohydrates,

Lipids and Proteins.



~ Balanced Diet

a. Nutrients

Nutrients that are essential for growth and survival. Macronutrients which are required by body in large amount and micronutrients which are required in small amount.

b. Vitamins

Vitamins are naturally inorganic substances used to trigger many chemical reactions in human body.

c. Carbohydrates

Carbohydrates are the chief source of energy for body. It helps in cell-to-cell communication and proper metabolism in the body. Carbohydrates provide 3.9 kcal/energy.

Glucose, Fructose i.e

d. Proteins

Proteins provide 4.2 kcal of energy to the body. It help in balancing body fluids, providing energy and regulating body structure.

e. Lipids

Lipids produce 9 kcal of energy to the body. It helps in insulation and energy storage in the body.

3. Importance of Balanced Diet

- i. It is helpful for digestion in the human body.
- ii. It is necessary to fight diseases.
- iii. It keeps the body fit and healthy.

(C) Artificial Intelligence Revolutionized the World

1. Introduction

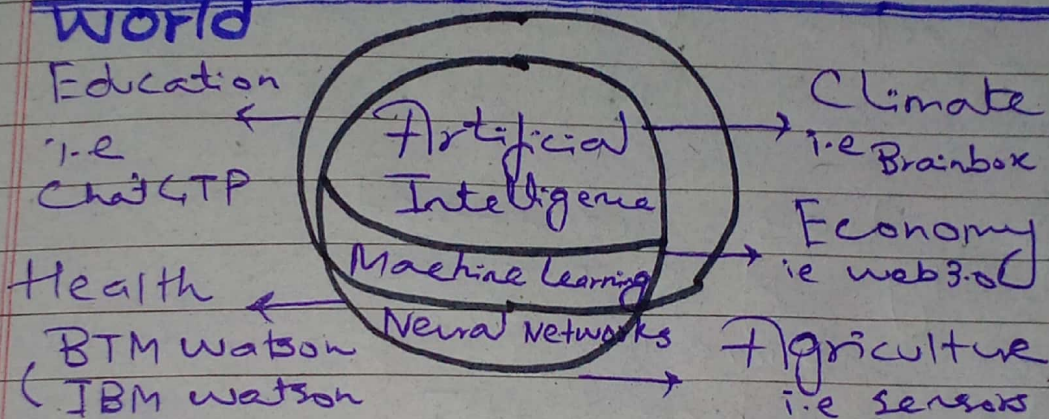
Advancements in technology has revolutionized the world. Artificial Intelligence

has taken in every aspect of life. AI has played its role in the field of education, economy, health and climate. Thus it has revolutionized the world.

2. Artificial Intelligence

Artificial Intelligence is defined as the "intelligence of machines that has the ability to mimic the human's role. It was developed by John McCarthy.

3. AI has Revolutionized the World



a. Role of AI in Education

AI has evolved the landscape of education. It has developed personal learning. Students can make their

projects with the help of ChatGPT and Quillbot AI tools.

b. Role of AI in Health

AI has now used in

Date _____

the field of health. AI tools such as IBM Watson has been using in the health sector to perform surgeries and disease detection.

c. Role of AI in Climate

AI tools such as "Brainbox" a tool developed by Canadian technology company is now used in homes to reduce the energy emissions from cooling products and to tackle climate challenge.

d. Role of AI in Surveillance

AI has increased the ability of organizations, individuals for surveillance of people. In China AI technology is now used in surveillance of employers.

e. Role of AI in Economy

AI tools has now used in growth of economy. AI tool such as web3.0 creates job opportunities for freelancers. In addition, AI tools helps in content creation for freelancers.

(d)

RAM

ROM

1. Stands for

Random Access
MemoryRead only
Memory

2. Memory

Volatile

Non-Volatile

3. Storage

Temporary

Permanent

4. Capacity

Large Capacity

Small Capacity

5. Expensive or Cheap

It is expensive

It is cheap

6. Read or write

RAM allows
read and
write bothIt allows
only Read.

Q.4
(d)

1. Microwave

Its wavelength is in cm.

- (1) Used to predict weather.
- (2) Used to cook food.
- (3) Used in radar, satellite communications.
- (4) Used in industrial heating.

2. Ultraviolet

Its wavelength is 10-30nm.

- (1) It is used in laboratory to sterilized chemicals.
- (2) Used to detect forge notes.
- (3) Used to synthesize Vitamin-D
- (4) Used to treat cancer.

3. X-Rays

Its wavelength is in 0.01 - 10nm.

- (1) Used to penetrate body and bones
- (2) Used in the diagnosis of fractured bones, tumors and abnormal masses.

(c)

1. Myopia

It is a condition in which person cannot see distant objects clearly.

It is corrected by concave lens.

2. Hyperopia

It is a disease in which person cannot see near objects clearly.

It is corrected by convex lens.

3. Major Parts of Eye

1. Sclera
2. Pupil
3. Eye lens
4. Iris
5. Retina

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(b)

Human Heart in Blood Circulation

Blood travels through the body has given up most of the O_2 and picked up CO_2 from the body tissues. CO_2 blood present in the venacava pump blood to right atrium from where it pumps in to right ventricle. Right ventricle pumps blood in to lungs with the help of pulmonary artery. O_2 rich blood from lungs pump in to the left atrium and ~~right~~ left ventricle from where it goes in to the heart with the help of pulmonary ventricle and then it goes it to the aorta from aorta it goes in to blood vessels.

(Q)

1. Solid Waste Management

Solid waste management includes the methods to collect, transfer and disposition of wastes.

2. Methods

a. Open burning

Open burning of solid waste in fields etc is still in place in many parts of the world in developing countries.

b. Landfills

It is an easy and cost effective method. A deep trench is excavated and microorganisms acts on waste to degrade them.

c. Reduce, Reuse and Recycle

Reduce, Reuse and Recycle waste at the source site.

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Q6

a. Solution

votes of candidate A = 15000

votes of candidate B = 10000

votes of candidate C = 8000

Percentage of winning candidate = ?

Total votes = 33000

A winning candidate votes = 15000

$$\text{Percentage of candidate A} = \frac{\text{vote of winning candidate} \times 100}{\text{Total votes}}$$

$$= \frac{15000 \times 100}{33000}$$

$$= \boxed{45.45\%}$$

Percentage of winning Candidate A votes = 45.45%

b. Solution

Ratio of angles of triangle 3:4:5

Sum of all three angles
ratio = $5 + 4 + 3 = 12$ Sum of angles of triangle = 180°

$$\text{Angle 1} = \frac{\text{ratio of angle}}{\text{sum of ratio angles}} \times \text{sum of angles}$$

$$= \frac{3}{12} \times 180 = \frac{96}{2} = 48$$

$$= 45^\circ$$

$$\text{Angle 2} = \frac{4}{12} \times 180$$

$$= \frac{60}{2} = 60^\circ$$

$$\text{Angle 3} = \frac{5}{12} \times 180$$

$$= \frac{180}{2} = 75^\circ$$

$$\begin{aligned} \text{Sum of all angles of triangle} &= \text{Sum of angles of triangle} \\ 180^\circ &= 75 + 60 + 45 \\ &= 180^\circ \end{aligned}$$

C. Solution

Group consist of girls = 6

Group consist of boys = 4

Total girls available = 102

Total groups formed = $\frac{\text{Total girls}}{\text{no of girls in each group}}$

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$$= \frac{102}{6}$$

Total groups = 17 = 17
formed

No of boys required = 17 x 4
= 68

Q8

(b)

(i) 4, 16, 36, 64, 100, 144

(ii) 30, 29, 27, 24, 20, 15

(iii) 1, 7, 15, 25, 37, 51

(iv) 0, 2, 6, 12, 20, 30, 42

(v) 48, 24, 72, 35, 108, 143

(c)

(i)

(ii) DANGER DANGER

(iii)

(iv) LONDON

(v) Holiday - HOLIDAY