"This is a Sevak-Sevika demo book designed to give you a preview of our comprehensive study material. We provide well-researched preliminary study resources to help you build a strong foundation for your exams. Our content is regularly updated to align with the latest syllabus and exam patterns.

For the main exam, we also provide additional study materials here at no extra cost. To further support your preparation, we offer free test series that help you assess your knowledge, identify weak areas, and improve your performance effectively.

Join thousands of successful students who have benefited from our resources and take the next step toward achieving your goals with confidence. Start your preparation with us today!"

ଏହି ଇ-ବୁକ୍ କେବଳ ଡେମୋ ଉଦ୍ଦେଶ୍ୟରେ। ଆପଣ ସମ୍ପୂର୍ଣ୍ଣ ପୁଞ୍ଚକଟି ଅର୍ଡର କରିପାରିବେ।



Some Important FAQ

Can I share this eBook with others?

We work hard to create this eBook, and we kindly ask that you do not share it with others. Sharing it without permission is not only unfair to our hard work, but it also violates copyright laws. Please respect the effort and legal protections that go into producing this content.

What should I do if I find errors or issues in the eBook?

If you come across any errors or issues, please contact us directly. We appreciate your feedback and will work to correct any mistakes in future updates.

Can I print pages from this eBook?

Yes, you are permitted to print pages from this eBook for personal use only. Please ensure that any printed copies are used solely for your reference and are not distributed or shared. If you require any assistance with printing or have specific needs, feel free to contact us for support.

Is it allowed to modify or adapt the content of this eBook?

No, modifications or adaptations of the content are not allowed. The eBook is protected by copyright, and all content must be used as originally published.

How can I report unauthorized distribution of this eBook?

If you encounter unauthorized distribution of this eBook, please let us know immediately. We will take necessary actions to address the situation.

Will there be updates to this eBook?

Yes, we periodically update the eBook to correct errors and improve content. Be sure to check for updates regularly.

Can I use the eBook content for my own publications or projects?

No, the content of this eBook cannot be used for any other publications or projects without prior written permission from us.

How can I contact you for support or inquiries?

For any support or inquiries, please reach out to us at Gmail. We are here to help!

Any Mistake / Help/ Support Contact - teamodiaguide@gmail.com

How to Get an Updated eBook

To receive updates for your eBook, please follow the steps below:

Remember Your User ID and Password:

Ensure that you keep your user ID and password safe, as you will need them to log in and access any updates.

Login to Your Account:

- Visit our website www.odiaguide.in
- Click on the "Login" button at the top of the page.
- Enter your registered user ID and password.

Access the eBook Update:

- After logging in, go to the "My download" section of your account.
- If an updated version of your eBook is available, you will see there.
- Click on "Download Option" to get the latest version of the eBook.

Download the Updated eBook for Free:

 The update is completely free of charge for existing users. Simply click on the download button to save the updated eBook to your device.

Stay Notified:

 We will notify you via email whenever an update is available, so please ensure your contact information is up to date.

How often are updates provided for the eBook?

We provide regular updates for our eBooks every 15 to 30 days, ensuring that you always have access to the latest content and improvements. Please visit our website regularly to check for the latest updates.

If you experience any issues while accessing your updates, feel free to contact our support team at [your contact information]. We're happy to help!

Important: Keep Your Login ID and Password

If you want to access updates for your eBook, please make sure to remember your login ID and password. These are essential for logging into your account and downloading the latest updates. Without them, you won't be able to retrieve your updated eBook.

The final phase of the Indian National Movement saw intense struggle, with significant events like the Quit India Movement (1942), Subhas Chandra Bose's role in the formation of the Indian National Army (INA), and the ultimate Independence and Partition of India (1947). This phase culminated in the achievement of India's independence from British rule and the creation of two separate nations: India and Pakistan.

1. Quit India Movement (1942): Demand for Complete Independence

Background:

- The Quit India Movement (1942), also known as the August Revolution, was launched by Mahatma Gandhi and the Indian National Congress (INC) in response to British refusal to grant immediate independence during World War II.
- The Second World War had intensified political pressures, with the British government demanding Indian resources and support for the war effort. However, Indian leaders sought full autonomy and rejected any further negotiations with the British under the Cripps Mission (1942).

Key Features of the Movement:

- Gandhi's call for "Do or Die" resonated with millions of Indians. The slogan demanded the immediate withdrawal of British rule from India.
- Gandhi was arrested along with many INC leaders. Despite the absence of their leadership, the movement gained massive support from the masses, leading to strikes, protests, and widespread civil disobedience across the country.
- The British responded with brutal repression, arresting leaders, banning public meetings, and suppressing protests.

Outcome:

- Although the movement was suppressed, it played a crucial role in intensifying the national demand for independence.
- The Quit India Movement marked the beginning of the end of British rule, as the British realized that they could no longer maintain control over India without facing widespread resistance.

2. Subhas Chandra Bose and INA: Contribution to the Freedom Struggle

Subhas Chandra Bose:

- Subhas Chandra Bose, a prominent leader of the Indian National Congress, differed with Mahatma Gandhi's approach of non-violence. Bose believed in a more direct and militant approach to achieving independence.
- Bose became the leader of the Forward Bloc within the INC and later sought international support to fight against the British, primarily through Axis Powers like Germany and Japan during World War II.

Formation of the Indian National Army (INA):

 During his exile, Bose established the Indian National Army (INA) in 1942 with the help of the Japanese government. The INA aimed at liberating India from British rule by force and received support from Indian prisoners of war captured by Japan.

1. National Governance

(ରାଷ୍ଟ୍ରୀୟ ସରକାରୀ ପ୍ରଶାସନ)

- Governance at the national level involves central government policies, legislation, and administration.
- This includes areas like national defense, economic policy, foreign affairs, and national infrastructure.

2. State or Regional Governance

(ରାଜ୍ୟ କିମ୍ବା ଆଞ୍ଚଳିକ ସରକାରୀ ପ୍ରଶାସନ)

 State governments have autonomy over certain areas like education, healthcare, and local infrastructure within the framework of national laws.

3. Local Governance

(ସ୍ଥାନୀୟ ସରକାରୀ ପ୍ରଶାସନ)

- Local governance focuses on local issues, including urban management, education, and public health in towns, cities, or villages.
- Local councils or municipal bodies are responsible for implementing government policies at the grassroots level.

Role of Governance in Development

(ବିକାଶରେ ସରକାରୀ ପ୍ରଶାସନର ଭୂମିକା)

1. Social Development

 Good governance fosters education, healthcare, and social welfare programs that improve living standards and reduce poverty.

2. Economic Development

 Governance ensures economic policies are put in place to foster job creation, investment, and economic growth while minimizing corruption.

3. Environmental Protection

 Sustainable governance integrates environmental protection into decision-making, ensuring responsible use of natural resources.

4. Good Governance and Human Rights

 Promotes and safeguards human rights, ensuring that all citizens enjoy their rights and freedoms equally.

Constitutional and Legal Framework in India

(ଭାରତର ସଂବିଧାନିକ ଏବଂ କାନୁନିକ ପାଇଁ ଢାଞ୍ଚା)

The **Indian Constitution** is the supreme law of India, providing the legal framework for governance and ensuring the rights, duties, and powers of citizens, the government, and its institutions. The Constitution lays down the **foundation** of India's **democratic governance**.

Features of the Indian Constitution

(ଭାରତ ସଂବିଧାନର ବୈଶିଷ୍ୟ)

1. Fundamental Rights

(ମୌଳିକ ଅଧିକାର)

- Part III of the Indian Constitution guarantees certain basic rights to individuals. These
 rights are justiciable, meaning they can be enforced by courts.
- Rights include:
 - Right to Equality (Article 14-18)
 - Right to Freedom (Article 19-22)
 - Right against Exploitation (Article 23-24)
 - Right to Freedom of Religion (Article 25-28)
 - Cultural and Educational Rights (Article 29-30)
 - Right to Constitutional Remedies (Article 32)
- These rights protect individuals' freedom and ensure equal treatment before the law.

2. Directive Principles of State Policy

(ରାଜ୍ୟ ନୀତିର ଦିର୍ଦ୍ଦେଶନାମା)

- Part IV of the Constitution outlines the Directive Principles of State Policy, which are guidelines for the government to follow while making laws and policies.
- They are non-justiciable (not enforceable in courts) but provide a framework for social justice, economic welfare, and the overall well-being of citizens.
- o Key areas include:
 - Promotion of education and public health
 - Equal distribution of wealth
 - Protection of environment
 - Workers' rights and social security.

3. Fundamental Duties

(ମୌଳିକ କର୍ତ୍ତବ୍ୟ)

- Part IVA outlines the duties of citizens to promote national integrity and contribute to the well-being of the country.
- Some key duties include:
 - To abide by the Constitution
 - To promote harmony and the spirit of common brotherhood
 - To safeguard public property
 - To protect and improve the environment.

Separation of Powers

(ଶକ୍ତିର ବିଭାଗନା)

The **Separation of Powers** principle divides the government into three branches: **Legislature**, **Executive**, and **Judiciary**, each with distinct powers and functions. This ensures a system of **checks and balances** to avoid any one branch from becoming too powerful.

1. Legislature

(ସନ୍ଗୁହନା)

Notable Plateaus:

- o Deosai Plateau (Pakistan): A high-altitude plateau known for its rich biodiversity.
- Tibetan Plateau (China): Known as the "Roof of the World," it is the highest and largest plateau.
- Colorado Plateau (USA): Famous for its Grand Canyon.
- Significance: Plateaus are rich in minerals and natural resources, often serving as centers of agriculture, industry, and settlement.

c) Plains

Definition: Large, flat, or gently sloping areas of land, often formed by river deposition or
erosion.

Notable Plains:

- Indo-Gangetic Plain (Asia): One of the most fertile regions in the world, formed by the Ganga, Brahmaputra, and Indus rivers.
- Great Plains (North America): A vast expanse of flat land known for its agricultural productivity.
- Pampas (South America): Fertile lowlands in Argentina, Uruguay, and Brazil, known for agriculture.
- Significance: Plains support large human populations due to their fertile soil and suitability for agriculture.

d) Deserts

• **Definition**: Dry, arid regions that receive minimal rainfall, often with extreme temperature fluctuations.

Notable Deserts:

- o Sahara Desert (Africa): The largest hot desert, located in northern Africa.
- Arabian Desert (Middle East): A large desert that spans much of the Arabian Peninsula.
- o Gobi Desert (Asia): A cold desert located in northern China and southern Mongolia.
- Karakum Desert (Central Asia): A vast desert in Turkmenistan.
- **Significance**: Deserts are characterized by unique ecosystems and limited water resources, making them challenging environments for human habitation.

e) Rivers

- Definition: Large natural streams of water that flow towards an ocean, sea, or lake.
- Notable Rivers:
 - o Amazon River (South America): The world's largest river by discharge and length.
 - Nile River (Africa): The longest river in the world, flowing through northeastern Africa.
 - Yangtze River (China): The longest river in Asia.
 - o Ganges River (India): A holy river in Hinduism and vital for millions of people.
- **Significance**: Rivers are crucial for transportation, agriculture, water supply, and have cultural and religious importance.

2. Oceans and Seas

Average

Average: The sum of all the observations divided by total number of observations is called Average.

 $\therefore \text{ Average } = \frac{\text{Sum of all observations}}{\text{Number of observations}}$ Sum of all observations = Average \times No. of observations.

Some Important AGeneral Formulae:

- (i) The average of consecutive natural numbers up to n is $\left(\frac{n+1}{2}\right)$
- (ii) The average of odd numbers from 1 to n $= \left(\frac{\text{Last odd number } + 1}{2}\right)$
- (iii) The average of even numbers from 1 to n $= \left(\frac{\text{Last even number } + 2}{2}\right)$
- (iv) The average of first n consecutive even numbers = (n + 1)
- (v) The average of first n consecutive odd numbers = n

ସଂଖ୍ୟା

ପ୍ରକୃତ ସଂଖ୍ୟା – 1, 2, 3...... ପୂର୍ଣ୍ଣ ସଂଖ୍ୟା – 0, 1, 2, 3, 4, ଯୁଗ୍ମ ସଂଖ୍ୟା – 2, 4, 6, 8, ଅଯୁଗ୍ମ ସଂଖ୍ୟା – 1, 3, 5, 7, 9..... ଗୁଣଜ ବା ପାହାଡା – 7, 14, 21,

Questions 1:

(1) Find The Average of the first 100 natural Number

ପ୍ରଥମ 100 ପ୍ରାକୃତିକ ସଂଖ୍ୟାର ହାରାହାରି ସନ୍ଧାନ କରନ୍ତୁ

$$\frac{1+100}{2} = \frac{101}{2} = 50.5$$

Questions 2:

- (2) What will be the average of even numbers up to 60?
- ୬୦ ପର୍ଯ୍ୟନ୍ତ ସଂଖ୍ୟାର ହାରାହାରି ଯୁଗ୍ମ ସଂଖ୍ୟା କେତେ ହେବ?

2,4,6,8 60
So Average
$$\frac{2+60}{2} = \frac{62}{2} = 31$$

Questions 3:

Find the average of first 60 whole number ପ୍ରଥମ 60 ସମ୍ପୂର୍ଣ୍ଣ ସଂଖ୍ୟାର ହାରାହାରି କାଶନ୍ତୁ

Questions 4:

(4) Find the Average of first 20 even number20 ପର୍ଯ୍ୟନ୍ତ ଅଯୁଗ୍ମ ସଂଖ୍ୟାର ହାରାହାରି ସନ୍ଧାନ କରନ୍ତୁ

$$\frac{2+40}{2} = \frac{42}{2} = 21$$

Questions 5:

Find the average of odd number up to 40

So Avearage =
$$\frac{1+39}{2} = \frac{40}{2} = 20$$

Questions 6:

ସଂଖ୍ୟା କେତେ ?

Average of 5 Consecutive Number is 42, Then Find the smallest number ଲଗାଡାର 5 ଟି ସଂଖ୍ୟାର ଏଭାରେଜ 42 ତାହେଲେ ସବୁଠୁ ଛୋଟ

40 41 42 43 44

So Smallest Number 40, Average = 42

ମନେ ରଖନ୍ତୁ ଏଭାରେଜ ସବ୍ରବେଳେ ମଝି ସଂଖ୍ୟା ହୋଇଥାଏ

Questions 7:

The average of 4 consecutive numbers is 22.5, which will be the smallest number. ଲଗାତର ୪ ଟି ସଂଖ୍ୟାର ଏଭାରେଜ 42 ତାହେଲେ ସବୁଠୁ ଛୋଟ ସଂଖ୍ୟା କେତେ ?

21 22 22.5 23 24

So Smallest Number Is 21

ଏଠାରେ ଚାରିଟା ସଂଖ୍ୟା ଅଛି ତେଣୁ 22.5 ହେବ ଏଭାରେଜ

Questions 8:

The average of the 5 even numbers is 108 , then the smallest number will be ଲଗାତାର 5 ଟି ଯୁଗ୍ମ ସଂଖ୍ୟାର ଏଭାରେଜ ୧୦୮ ତାହେଲେ ସବୁଠୁ ଛୋଟ ସଂଖ୍ୟା କେତେ ?

104 106 108 110 112 So Smallest Number is = 104

Questions 9:

The average of 4 consecutive even numbers is 47, then the biggest number will be

ଲଗାତର 5 ଟି ସଂଖ୍ୟାର ଏଭାରେଜ 47ତାହେଲେ ସବୁଠୁ ବଡ ସଂଖ୍ୟା କେତେ ?

44 46 47 48 50 So Biggest Number is = 50

Questions 9:

A train goes from Jaipur to Delhi at a speed of 60 km/h and returns at a speed of 40 km/h, then find the average speed of that train ଏକ ଟ୍ରେନ୍ ଜୟପୁରରୁ ଦିଲ୍ଲୀକୁ 60 ପ୍ରତି ଘଣ୍ଟା ବେଗରେ ଯାଇ 40 ପ୍ରତି ଘଣ୍ଟା ଫେରିଥାଏ, ତା'ପରେ ସେହି ଟ୍ରେନର ହାରାହାରି ଗତି କେତେ ହେବ

Average =
$$=\frac{2xy}{x+y} = \frac{2\times60\times40}{40+60} = 48 \text{ km/hr}$$

ମନେରଖନ୍ତୁ ଏଠି ଯିବା ଗତିକୁ "x' ଓ ଆସିବା ଗତିକୁ 'y' ନିଆଯାଇଛି

Questions 10:

The average weight of 20 students in a class is 40 kg. If the weight of each student is increased by 5 kg in then the average of the class will be ଗୋଟିଏ ଶ୍ରେଶୀରେ 20 ଜଣ ଛାତ୍ରଙ୍କ ହାରାହାରି ଓଜନ 40 kg ଅଟେ | ଯଦି ପ୍ରତ୍ୟେକ ଛାତ୍ରଙ୍କ ଓଜନ 5 କିଲୋଗ୍ରାମରେ ବୃଦ୍ଧି ହୁଏ ତେବେ ଶ୍ରେଶୀର ହାରାହାରି ଓଜନ କେତେ ହେବ |

20 student
$$\cdots - 40$$
kg
Every 5 kg $\cdots - 40 + 5 = 45$ kg
So average $= 45$ Kg

Questions 11:

The average weight of 20 students of a class is 50 kg. If 5 students join and the average weight increases by 2 kg, then the total weight of the new students will be

ଗୋଟିଏ ଶ୍ରେଣୀର 20 ଜଣ ଛାତ୍ରଙ୍କର ହାରାହାରି ଓଜନ 50 kg ଅଟେ । ଯଦି 5 ଜଣ ଛାତ୍ର ଯୋଗ ଦିଅନ୍ତି ଏବଂ ହାରାହାରି ଓଜନ 2 kg ବୃଦ୍ଧି ହୁଏ, ତେବେ ନୂତନ ଛାତ୍ରମାନଙ୍କର ମୋଟ ଓଜନ ହେବ ।

20 student -50 kg - 50*20 = 1000 kg25 student---52 kg -52*25 = 1300 kgso new student total weight = 1300 - 100 = 300

Questions 12:

The average weight of 10 students in a class is 35 kg. If the teacher's weight is also included, then the average increases by 1 kg, then the teacher's weight will be

ଗୋଟିଏ ଶ୍ରେଣୀରେ 10 ଜଣ ଛାତ୍ରଙ୍କ ହାରାହାରି ଓଜନ ହେଉଛି 35 kg। ଯଦି ଶିକ୍ଷକଙ୍କ ଓଜନ ମଧ୍ୟ ଅନ୍ତର୍ଭୂକ୍ତ ହୁଏ, ତେବେ ହାରାହାରି 1kg ବୃଦ୍ଧି ହୁଏ, ତେବେ ଶିକ୍ଷକଙ୍କ ଓଜନ ହେବ ।

10 student
$$--35 \text{ kg} - 35^*10 = 350 \text{ kg}$$

11 student---36 $-36^*11 = 396 \text{ kg}$
so teacher weight $= 396 - 350 = 46 \text{ kg}$

Questions 13:

The average of 4 numbers is 20, out of which the average of 3 numbers is 18. what will be the fourth number?

4 ଟି ସଂଖ୍ୟା ହାରାହାରି 20, ଯେଉଁଥିରୁ ହାରାହାରି 3 ସଂଖ୍ୟା ହେଉଛି 18. ଚତୂର୍ଥ ସଂଖ୍ୟା କ'ଶ ହେବ?

Questions 14:

A student scored an average of 80% marks in his 5 subjects, 82%84%78% and 72% marks in his four subjects, then what percentage of marks will be in his 5 th subject? ଜଣେ ଛାତ୍ର ତାଙ୍କର 5 ଟି ବିଷୟ ଉପରେ ହାରାହାରି 80% ମାର୍କ ଥିଲା, 82% 84% 78% ଏବଂ 72% ଟି ମାର୍କ ସ୍କୋର କରିଥିଲେ, ତାହେଲେ ତାଙ୍କର 5 ତମ ବିଷୟବସ୍ତୁରେ କେତେ ପ୍ରତିଶତ ମାର୍କ ରହିବ?

5 subject
$$\cdots - \cdots 0\% = 80 \times 5 = 400$$

4 subject = $82 + 84 + 78 + 72 = 316$
Then 5th subject $\cdots = 400 - 316 = 84\%$

Questions 15:

The average score of 60 boys in a class is 40 and the average score for 40 girls is 60 , then find the average score of all the students. ଗୋଟିଏ ଶ୍ରେଶୀରେ 60 ବାଳକଙ୍କ ହାରାହାରି ଷ୍କୋର 40 ଏବଂ 40 ବାଳିକାଙ୍କ ହାରାହାରି ଷ୍କୋର 60, ତା'ପରେ ସମୟ ଛାତ୍ରଙ୍କ ହାରାହାରି ଷ୍କୋର କେତେ ହେବ

Questions 16:

The average of 5 numbers is 20 . The average of the first 3 numbers is 21 , the average of the last 3 numbers is 22 , then find the third number.

ହାରାହାରି 5 ସଂଖ୍ୟା ହେଉଛି 20 | ପ୍ରଥମ 3 ସଂଖ୍ୟାଗୁଡିକର ହାରାହାରି ହେଉଛି 21, ଶେଷ 3 ସଂଖ୍ୟାଗୁଡିକର ହାରାହାରି 22, ତେବେ ତୃତୀୟ ସଂଖ୍ୟା କେତେ ହେବ

Questions 17:

The average temperature of a week is 30°C, the average for the first 3 days is 28°C and the average for the last 3 days is 29°C, then the temperature of the fourth day will be ଗୋଟିଏ ସପ୍ତାହର ହାରାହାରି ତାପମାତ୍ରା ହେଉଛି 300C- ପ୍ରଥମ ୩ ଦିନର ହାରାହାରି ତାପମାତ୍ରା 280C ଏବଂ ଗତ ୩ ଦିନର ହାରାହାରି ତାପମାତ୍ରା ହେଉଛି 290C, ତା'ହେଲେ ଚତୁର୍ଥ ଦିନର ତାପମାତ୍ରା ହେବ

7 days
$$\longrightarrow$$
 $7 \times 30 = 210$ ପ୍ରଥମ 3 day \longrightarrow $3 \times 28 = 84$ °C ଶେଷ 3 days \longrightarrow $3 \times 29 = +87$ °C \longrightarrow 171 °C

ତାହେଲେ 4^{th} days tempreture $210 - 171 = 39^{\circ}$ C

Questions 18:

If the sum of 5 earning numbers is 200, find the smallest number.

ଯଦି % ଟି ଲଗାତାର ସଂଖ୍ୟାର ଯୋଗ 200 ଅଟେ , ତେବେ ସବୁଠାରୁ ଛୋଟ ସଂଖ୍ୟା ଖୋଜନ୍ତୁ ।

Average = 200 / 5 = 40

Average 5 Number middle number

38 39 40 41

So smallest Number is = 38

Questions 19:

If a train travels from A to B at a speed of 60 km/h and returns at a speed of 40 km/h, find the average speed of the train ଯଦି କୌଣସି ଟ୍ରେନ୍ ଦ୍ରୁତ A ରୁ B ଆଡକୁ 60 କିମି ଘଣ୍ଟା ବେଗରେ ଯାତ୍ରା କରେ ଏବଂ 40 କିମି ପ୍ରତି ଘଣ୍ଟା ଦ୍ରୁତ ବେଗରେ ଫେରିଥାଏ, ତେବେ ଟ୍ରେନର ହାରାହାରି ବେଗ ନିର୍ଶ୍ଚୟ କରନ୍ତୁ A

Average Speed =
$$\frac{2ab}{a+b}$$

= $\frac{2 \times 60 \times 40}{60 + 40}$ = 48

Questions 20:

The average score of 30 boys is 20 and the average score of 20 girls is 30, then find the average score of all the students.

୩୦ ଜଣ ବାଳକଙ୍କ ହାରାହାରି ଷ୍କୋର ୨୦ ଏବଂ ୨୦ ଝିଅଙ୍କ ହାରାହାରି ଷ୍କୋର ୩୦, ତା'ପରେ ସମୟ ଛାତ୍ରଛାତ୍ରୀଙ୍କ ହାରାହାରି ଷ୍କୋର ଜାଣି ନିଅନ୍ତୁ।

30 ବାଳକଙ୍କର ଯୋଗ = $30 \times 20 = 600$

30 ବାଳିକାଙ୍କର ଯୋଗ = $20 \times 30 = 600$

ତାହେଲେ ଏଭାରେଜ =

$$=\frac{600+600}{30+20}=\frac{1200}{50}=24$$

Questions 21:

M is the average of numbers N2 and N is the average of numbers M2. Find the average of all the numbers.

M ସଂଖ୍ୟାର ହାରାହାରି N2 ଏବଂ N2 ସଂଖ୍ୟାର ହାରାହାରି M ଅଟେ । ସମୟ ସଂଖ୍ୟାର ହାରାହାରି ନିର୍ଦ୍ଧାରଣ କରନ୍ତୁ

$$\frac{MN^2 + NM^2}{M+N} = \frac{MN(M+N)}{(M+N)} = MN$$

Questions 22:

What is the average of the first 9 prime numbers?

ପ୍ରଥମ ୯ଟି ପ୍ରାଇମ ନମ୍ବରର ହାରାହାରି ସଂଖ୍ୟା କେତେ? Average =

$$=\frac{2+3+5+7+11+13+17+19+23}{9}$$

$$\frac{100}{9} = 11.11$$

Questions 23:

The average of 5 numbers is 10 . Which number should be added so that the average becomes 12?

ହାରାହାରି ୫ ସଂଖ୍ୟା ହେଉଛି ୧୦ । ହାରାହାରି ୧୨ ହେବା ପାଇଁ କେଉଁ ସଂଖ୍ୟା ଯୋଡାଯିବା ଉଚିତ ?

5 ସଂଖ୍ୟାର ଏଭାରେଜ 10 ର ଯୋଗ = 5*10=50 6 ସଂଖ୍ୟାର ଏଭାରେଜ 12 ର ଯୋଗ = 6*12=72 ତାହେଲେ ଯୋଡ଼ା ଯାଇଥିବା ସଂଖ୍ୟା = 72-50=22

Questions 24:

The average score of 240 students was 35 . If the average score of the passed student is 39 and the average score of the failed students is 15 , then how many students passed ୨୪୦ ଜଣ ଛାତ୍ରଛାତ୍ରୀଙ୍କ ହାରାହାରି ଷ୍ଟୋର ଥିଲା ୩୫ । ଯଦି ପାସ୍ କରିଥିବା ଛାତ୍ରଙ୍କ ହାରାହାରି ଷ୍ଟୋର ୩୯ ଏବଂ ଫେଲ୍ ହୋଇଥିବା ଛାତ୍ରଛାତ୍ରୀଙ୍କ ହାରାହାରି ଷ୍ଟୋର ୩୯ ଏବଂ ଫେଲ୍ ହୋଇଥିବା ଛାତ୍ରଛାତ୍ରୀଙ୍କ ହାରାହାରି ଷ୍ଟୋର ୧୫, ତେବେ କେତେ ଛାତ୍ରଛାତ୍ରୀ ପାସ୍ କରିଛନ୍ତି

ତାହେଲେ ପାସ ହେଇଥିବା ଛାତ୍ର =40 X 5 = 200

Questions 25:

The average weight of five persons sitting in a boat is 38 kg. The average weight of the boat and the persons sitting in the boat is 52kg. What is the weight of the boat? ଗୋଟିଏ ଡଙ୍ଗାରେ ବସିଥିବା ୫ ଜଣଙ୍କ ହାରାହାରି ଓଜନ ୩୮ କେଚ୍ଚି । ଡଙ୍ଗା ଓ ଡଙ୍ଗାରେ ବସିଥିବା ବ୍ୟକ୍ତିଙ୍କ ହାରାହାରି ଓଜନ ୫ ୨ କେଚ୍ଚି । ଡଙ୍ଗାର ଓଜନ କେତେ ?

(1) 228 kg

(2) 122 kg

(3) 232 kg

(4) 242 kg

The weight of Boat

 $= 6 \times 52 - 5 \times 38$

= 312 - 190 = 122kg

Questions 26:

A library has an average number of 510 visitors on Sunday and 240 on other days. The average number of visitors per day in a month of 30 days beginning with Sunday is : ଗୋଟିଏ ପାଠାଗାରରେ ରବିବାର ହାରାହାରି ୫ ୧ ୦ ଜଣ ଓ ଅନ୍ୟ ଦିନରେ ୨୪୦ ଜଣ ପର୍ଯ୍ୟଟକ ଆସିଥାନ୍ତି। ରବିବାରଠାରୁ ଆରହ୍ୟ କରି ୩୦ ଦିନ ର ଗୋଟିଏ ମାସରେ ଦୈନିକ ହାରାହାରି ପର୍ଯ୍ୟଟକଙ୍କ ସଂଖ୍ୟା ହେଉଛି

(1)285

(2)295

(3) 300

(4) 290

That month will have 5 Sundays.

∴ Required average

$$= \frac{5 \times 510 + 25 \times 240}{30}$$
$$= \frac{2550 + 6000}{30}$$
$$= \frac{8550}{30} = 285$$

Questions 27:

The average of 20 numbers is 15 and the average of first five is 12. The average of the rest is

ହାରାହାରି ୨୦ ସଂଖ୍ୟା ୧୫ ଏବଂ ପ୍ରଥମ ପାଞ୍ଚଟିର ହାରାହାରି ୧୨ । ବାକି ସବ୍ତର ହାରାହାରି ହେଉଛି

(1) 16

(2) 15

(3) 14

(4)13

If the average of remaining numbers be x, then

$$20 \times 15 = 5 \times 12 + 15x$$

$$\Rightarrow 300 = 60 + 15x$$

$$\Rightarrow 15x = 300 - 60 = 240$$

$$\Rightarrow x = \frac{240}{15} = 16$$

Questions 28:

Find the average of 1.11, 0.01, 0.101, 0.001, 0.11

(1) 0.2664

(2) 0.2554

(3) 0.1264

(4) 0.1164

Required Average

1.11 + 0.01 + 0.101 + 0.001 + 0.11

 $=\frac{1.332}{5}=0.2664$

Questions 29:

The average of 8 numbers is 27. If each of the numbers is multiplied by 8, find the average of new set of numbers.

ଯଦି ୮ଟି ସଂଖ୍ୟା ହେଉଛି ଏଭାରେଜ ୨୭। ଯଦି ପ୍ରତ୍ୟେକ ସଂଖ୍ୟାକୁ 8 ଗୁଣିତକ କରାଯାଏ, ତେବେ ନୂତନ ସଂଖ୍ୟାର ହାରାହାରି ସେଟ୍ ନିର୍ଦ୍ଧାରଣ କରନ୍ତୁ ।

(1) 1128

(2)938

(3) 316

(4)216

If each item is multiplied by 8 , their average gets multiplied by 8 .

∴ Required average

$$= 8 \times 27 = 216$$

Questions 30:

D. increases by 1.5

A cricketer gives 12.4 runs per wicket. He gives 26 runs and takes 5 wicket in a match after which his average becomes 12 per wicket. How many wickets had been taken till the last match?

A) 85 C) 65 B) 90

D) 72

The average of 11 numbers is 54, if the average of the first five numbers is 45 and the sum of last six numbers is 340+x then find the value of x.

A) 22

B) 32

C) 25

D) 29

A Car covers the distance from delhi to mumbai in 3 equal parts with a speed of 15 km/hr, 25 km/hr and 30 km/hr. Find the average speed of car

A) 21.42 km/hr

B) 20.42 km/hr

C) 19.42 km/hr

D) 18.42 km/hr

The average of 133 consecutive even numbers is 56924. Then find the sum of the first and the last number.

A) 134,831

B) 113,848

C) 114,338

D) 134,818

The average of 11 numbers is 17. The average of the first six numbers is 19 and the last four numbers is 15. Find out the seventh number.

A) 19

B) 15

C) 11

D) 13

RATIO & PROPORTION

୍ ଅନୁପାତ ର ଅର୍ଥ 2 : 3 ତଥା $\frac{2}{3}$

୍ ଅନୁପାତ କୁ ଭଗବଣ୍ଟା କରିବା ପାଇଁ ବ୍ୟବହାର କରାଯାଏ

ଯାହାର ପଘା କୁ ତାହାର ଗାଈ ସେମିତି ଯାହାର ରାଶି ତାହାର ଅନୁପାତ

Questions 1:

Which ratio will be the largest 2:5, 3:4, 5:6, 9:10

2:5, 3:4, 5:6, 9:10 ଏହି ଅନୁପାତ ସବୁଠାରୁ ଅଧିକ ହେବ

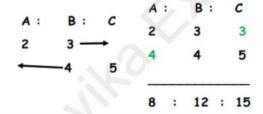
$$\frac{2}{5}$$
 $\frac{3}{4}$ $\frac{5}{6}$ $\frac{9}{10}$
 $\frac{20}{5}$ $\frac{30}{4}$ $\frac{50}{6}$ $\frac{90}{10}$

 4
 7.5

 8.3
 $\frac{90}{10}$
 $\frac{10}{2}$ $\frac{10}{2}$

Questions 2:

If A:B=2:3 and B:C=4:5, then A:B:C will be ଯଦି A:B=2:3 ଏବଂ B:C=4:5, ତେବେ A:B:C ହେବ



TRICK - ଯାହାର ଆଗେ ଖାଲି ଅଛି ସେଇ ସଂଖ୍ୟା କୁ ବଢ଼ାନ୍ତୁ

Questions 3:

lf 2A=3B and 3B=4C, find A:B:C. ଯଦି 2A=3B ଏବଂ 3B=4C, A:B:C କେତେ ହେବ

Questions 4:

Find the value of a if 16:42::32:a. ଯଦି 16:42::32:a ର ମୂଲ୍ୟ କେତେ ହେବ

16 X A = 42 X 32

 $A = 42 \times 8 = 84$

ବାହ୍ୟ ପଦର ଗୁଣା = ମଧ୍ୟ ପଦର ଗୁଣା

Questions 5:

Find the fourth ratio of 15,20 and 45 ଚତୁର୍ଥ ଅନୁପାତ 15,20 ଏବଂ 45 ଜଣାନ୍ତୁ

15: 20: : 45: a

 $15 \times a = 20 \times 45 = 60$

Find the median ratio of 9,16

 $9x 16 = \sqrt{144} = 12$

[ମାଧ୍ୟାନୁବର୍ତ୍ତୀ ସଂଖ୍ୟା ମାନଙ୍କର ଗୁଣା ସବୁବେଳେ "ବର୍ଗ" ହୋଇଥାଏ]

Questions 6:

If A and B divide Rs 4500 in 2: 3, then how much amount will B get? ଯଦି A ଏବଂ B 2: 3 ରେ 4500 ଟଙ୍କା ବିଭାଜନ କରନ୍ତି, ତେବେ B କେତେ ଟଙ୍କା ପାଇବ?

A : B 2 : 3

Total = 5a = 4500

A = 900

So B will get $900 \times 3 = 2700$

Questions 7:

Some amount is distributed to Ram, Shyam and Mohan in the ratio of 3:4:5. If Shyam gets Rs. 1200 then how much amount will Ram get? ରାମ, ଶ୍ୟାମ ଓ ମୋହନଙ୍କୁ ୩:୪:୫ ଅନୁପାତରେ କିଛି ରାଶି ବର୍ତ୍ତନ କରାଯାଏ । ଯଦି ଶ୍ୟାମଙ୍କୁ ୧୨୦୦ ଟଙ୍କା ମିଳେ ତେବେ ରାମ ଙ୍କୁ କେତେ ଟଙ୍କା ମିଳିବ?

Ram : Shyam : Mohan

3 4 5

Total Ram = 4a = 1200A = 300

ତାହେଲେ Ram ର ରାଶି ହେବ 300 X3 = 900

Questions 8:

A person has a 280 meter piece of wood. If the length of the smaller part is 75 percent of the larger part, then find the smaller part. କଣେ ବ୍ୟକ୍ତିଙ୍କ ପାଖରେ ୨୮୦ ମିଟର କାଠ ରହିଛି। ଯଦି ଛୋଟ ଅଂଶର ଦୈର୍ଘ୍ୟ ବଡ଼ ଅଂଶର 75 ପ୍ରତିଶତ ଅଟେ, ତେବେ ଛୋଟ ଅଂଶକ୍ର ଖୋଜନ୍ତୁ।

Smaller part : Larger Part

75 : 100 3 : 4

Total = 3 + 4 = 7a = 280

A = 40

So Smaller Part – 40 X 3 = 120 Meter

Questions 9:

If the ratio of the angles of a triangle is 2:3:5, find the value of the largest angle.

ଯଦି ତ୍ରିକୋଶର କୋଶର ଅନୁପାତ 2:3:5 ଅଟେ, ତେବେ ବୃହଉମ କୋଶର ମୂଲ୍ୟ ନିର୍ଦ୍ଧାରଣ କରନ୍ତୁ।

A : B : C

: 3 : 5

ଧ୍ୟାନ ରଖନ୍ତୁ ତ୍ରିଭୁଚ୍ଚ ର ତିନି କୋଣ 180 ଡିଗ୍ରୀ ହୋଇଥାଏ

TOTAL = 2+3+5 =10a = 180

a= 18

ତାହାଲେ C= 18*5= 90

Questions 10:

A person has a ratio of 1:1 and 50 paise coins in the thal: 3: 4. If the total amount is Rs. 45, find the coins of 50 paise.

କଣେ ବ୍ୟକ୍ତିଙ୍କର ଥାଲରେ ୧:୧ ଏବଂ ୫୦ ପଇସା ମୁଦ୍ରା ରହିଛି: ୩: ୪। ଯଦି ସମୁଦାୟ ପରିମାଣ ୪୫ ଟଙ୍କା, ତେବେ ୫୦ ପଇସାର ମୁଦ୍ରା ଖୋଜନ୍ତୁ।

1 Rs 50 Paisi

Coin 3 : 4

Rs 3 : 2

Total = 5a = 45

So Total Paisi = 9 X 4 = 36

Questions 11:

A farmer has some cows and some chickens. If the number of heads is 48 and the number of legs is 120, find the number of cows with the farmer.

କଣେ ଚାଷୀଙ୍କ ପାଖରେ କିଛି ଗାଈ ଓ କିଛି କୁକୁଡ଼ା ରହିଛି। ମୁକ୍ତ ସଂଖ୍ୟା ୪୮ ଓ ଗୋଡ଼ ସଂଖ୍ୟା ୧୨୦ ହେଲେ କୃଷକଙ୍କ ପାଖରେ ଗାଈସଂଖ୍ୟା ନିର୍ଦ୍ଧାରଣ କରନ୍ତ।

 $\frac{leg}{2}$ - head = 120 / - 48 = 60 - 48 = 12 (Cow)

Questions 12:

The sum of Rs 6500 in p, q and r with $\frac{1}{2}: \frac{1}{3}: \frac{1}{4}$ Then P get how much money

P: Q:: R

$$12 \times \frac{1}{2} 12 \times \frac{1}{3} 12 \times \frac{1}{4}$$

6: 4: 3
 $13a = 6500$
 $A = 6500/13 = 500$
Then $P = 500^*6 = 3000$ Rs

Questions 13:

The ratio of two numbers is 3:4. If 5 is added to each number, the ratio becomes 7: 9, then find the smaller number.

ଦୁଇଟି ସଂଖ୍ୟାର ଅନୁପାତ ହେଉଛି ୩:୪ । ଯଦି ପ୍ରତ୍ୟେକ ସଂଖ୍ୟାରେ 5 ଯୋଡାଯାଏ, ଅନୁପାତ 7: 9 ହୋଇଯାଏ, ତା'ପରେ ଛୋଟ ସଂଖ୍ୟା ସନ୍ଧାନ କରନ୍ତ ।

$$\frac{3a+5}{4a+5}\frac{7}{9}$$
 ବକ୍ର ଗୁଣନ କରନ୍ତୁ $27a+45=28a+35$ Then $28a-27a=45-35$ $a=10$ ତାହେଲେ ଛୋଟ ସଂଖ୍ୟା $10 \times 3=30$

Questions 14:

If the salt and water mixture of 40 liters of salt and water is in 2: 3, find the amount of water in the mixture.

ଯଦି ୪୦ ଲିଟର ଲୁଣ ଓ ପାଣିର ଲୁଣ ଓ ପାଣିର ମିଶ୍ରଣ ୨:୩ ରେ ଥାଏ, ତେବେ ମିଶ୍ରଣରେ ପାଣିର ମାତ୍ରା ଜାଣି ନିଅନ୍ତୁ ।

Salt water
2 : 3
Total
$$2a + 3a = 5a$$

 $5a = 40$
 $a = 8$

So water Amount 8 X 3 = 24 Liter

Questions 15:

If the ratio of the areas of two squares is 16:1, then the ratio of their perimeters is?

A)
$$4:1$$

B)16:1

D)3:4

ବର୍ଗର କ୍ଷେତ୍ରଫଳ
$$= (ବାହୁ)^2$$

ଦୁଇଟି ବର୍ଗ ର ବହୁର ଅନୁପାତ =4:1

ଦୁଇ ବର୍ଗର ପରିମିତି ର ଅନୁପାତ =4:1

Questions 16:

If a: b = 3: 4 and b: c = 4: 7 then $\frac{a+b+c}{c} = ?$ (OSSC EXAM, 2019)

Questions 17:

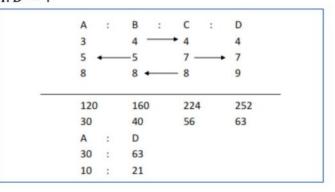
If $A = B \frac{4}{5}$ and $B = C \frac{5}{2}$ then Find A: C = ?

$$\begin{array}{ccccc}
A & B & C \\
4 & 5 & \longrightarrow 5 \\
\hline
5 & \longrightarrow & 5 \\
\hline
20 & 25 & 10
\end{array}$$

A C 20 : 10 2 : 1

Questions 18:

If A: B = 3: 4, B: C = 5: 7 and C: D = 8: 9, then A: D = ?



Questions 19:

If
$$A: B = \frac{2}{9}: \frac{1}{3}$$
; $B: C = \frac{2}{7}: \frac{5}{14}$ and $C: D = \frac{5}{6}: \frac{3}{4}$ then find $A: B: C: D = ?$

A :
$$B = \frac{2}{9} : \frac{1}{3} = 6 : 9 = 2 : 3$$

B : $C = \frac{2}{7} : \frac{5}{14} = 28 : 35 = 4 : 5$

C : $D = \frac{5}{6} : \frac{3}{4} = 20 : 18 = 10 : 9$

A : B : C : D

2 3 3 3 3

4 4 5 5

10 10 10 9

80 120 150 135

16 24 30 27

Questions 20:

Two numbers are in the ratio 1: 3. If their sum is 240, what is their difference?

ଦୁଇଟି ସଂଖ୍ୟା ୧: ୩ ଅନୁପାତରେ ଅଛି । ଯଦି ସେମାନଙ୍କର ପରିମାଣ 240 ଅଟେ, ତେବେ ସେମାନଙ୍କର ପାର୍ଥକ୍ୟ କ'ଶ?

Questions 21:

Two numbers are in the ratio 3:4 and the least common multiple is 84 . What will be the greater number of these? ଦୁଇଟି ସଂଖ୍ୟା ୩:୪ ଅନୁପାତରେ ଏବଂ ସର୍ବନିମ୍ନ ସାଧାରଣ ସଂଖ୍ୟା

ହେଉଛି ୮୪ । ଏମାନଙ୍କ ମଧ୍ୟରୁ ଅଧିକ ସଂଖ୍ୟା କେତେ ହେବ? (OSSSC EXAM 2020, 2013, OPSC 2019)

Questions 22:

Two natural numbers are in the ratio 3:5 and their product is 2160, what will be the smaller number?

ଦୁଇଟି ପ୍ରାକୃତିକ ସଂଖ୍ୟା ଅନୁପାତରେ ଅଛି ଏବଂ ସେମାନଙ୍କର ଉତ୍ପାଦ ହେଉଛି 2160 - ଛୋଟ ସଂଖ୍ୟା କ'ଣ ହେବ?

। ।।
3 : 5
15
$$a^2 = 2160^\circ$$

 $a^2 = 144$
 $a = 12$
ତାହାଲେ ହୋଟ ସଂଖ୍ୟା
 $= 12 X 3$
 $= 36$

ଅଧିକ, ସବୁଠାରୁ ବଡ଼ ସଂଖ୍ୟା କ'ଣ?

Questions 23:

The three numbers are in the ratio 3: 4:5 respectively. The sum of the first and third numbers is 52 more than the second number, what is the largest number? ଏହି ତିନୋଟି ସଂଖ୍ୟା ଯଥାକ୍ରମେ ୩: ୪:୫ ଅନୁପାତରେ ରହିଛି । ପ୍ରଥମ ଓ ତୃତୀୟ ସଂଖ୍ୟାର ଯୋଗ ହ୍ବିତୀୟ ସଂଖ୍ୟା ତୁଳନାରେ ୫ ୨

$$3:4:5$$
 ଅନ୍ତର $2a=52$ କମ ଅଧ୍କ ସବୁବେଳେ ଅଚନ ବତେଇଥାବି $a=26$ ତାହେଲେ ବଡ଼ ସଂଖ୍ୟା $=26\,X\,5=130$

Questions 24:

The three numbers are in the ratio 5:6:7. If the product of these numbers is 5670, then which are the largest numbers among them? ଏହି ତିନୋଟି ସଂଖ୍ୟା ୫:୬:୭ ଅନୁପାତରେ ରହିଛି । ଯଦି ଏହି ସଂଖ୍ୟାଗୁଡ଼ିକର ଉତ୍ପାଦ 5670 ଅଟେ, ତେବେ ସେମାନଙ୍କ ମଧ୍ୟରୁ କେଉଁଟି ସବଠାରୁ ଅଧିକ ସଂଖ୍ୟା?

Questions 25:

3 ଦିନ ର 30 ଘଣ୍ଟା ସହ ଅନୁପାତ ଜ୍ଞାନତ କରନ୍ତୁ

d) Rs. 1780

e) None of these

Murugan: Prasanna: Arun

 $= (8000 \times 6): (4000 \times 8): (80(10 \times 8))$

=48:32:64

= 3:2:4

Kamal's share

 $= Rs.4005 \times 2/9$)

= Rs. 890

Questions 39:

A, B and C enter into a partnership. They invest Rs.40,000, Rs.80,000 and Rs.1,20,000 respectively. At the end of the first year, B withdraws Rs.40,000 while at the end of the second year, C withdraws Rs.80,000. In what ratio will the profit be shared at the end of 3 years?

A, B ଓ C ପାର୍ଟନରସିପ୍ ରେ ପ୍ରବେଶ କରନ୍ତି। ସେମାନେ ଯଥାକ୍ରମେ 40000, 80000 ଏବଂ 120000 ଟଙ୍କା ନିବେଶ କରନ୍ତି । ପ୍ରଥମ ବର୍ଷ ଶେଷରେ, B 40000 ଟଙ୍କା ଉଠାଉଥିବା ବେଳେ ହ୍ବିତୀୟ ବର୍ଷ ଶେଷରେ, C 80000 ଟଙ୍କା ଉଠାଏ। ୩ ବର୍ଷ ଶେଷରେ ଲାଭ କୂ କେଉଁ ଅନୁପାତରେ ବଣ୍ଟନ କରାଯିବ?

a) 2:3:5

b) 3:4:7

c) 4:5:9

d) Data inadequate

e) None of these

A: B: C

 $=(40000\times36):(80000\times12+40000\times24)$

: (120000×24+40000×12)

=144:192:336

= 3:4:7

Questions 40:

A starts a business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2: 3. What is B's contribution in the capital?

A 3500 ଟଙ୍କାରେ ଏକ ବ୍ୟବସାୟ ଆରୟ କରେ ଏବଂ 5 ମାସ ପରେ, B A ସହିତ ତାଙ୍କର ଅଂଶୀଦାର ଭାବରେ ଯୋଗ ଦିଏ । ଏକ ବର୍ଷ ପରେ, ଲାଭକୁ 2 : 3 ଅନୁପାତରେ ବିଭକ୍ତ କରାଯାଏ ପୁଞ୍ଜିରେ B ର ଅବଦାନ କ'ଣ?

a) Rs. 7500

b) Rs. 8000

c) Rs. 8500

d) Rs. 9000

e) None of these

Let B's capital be Rs.x. Then,

 $3500 \times 12/7x$

= 2/3

 $\Leftrightarrow 14x = 126000$

x = 9000

Questions 41:

A started a business with Rs.21,000 and is joined afterwards by B with Rs.36,000. After how many months did B join if the profits at the end of the year are divided equally? ସେ ୨ ୧,୦ ଟଙ୍କାରେ ବ୍ୟବସାୟ ଆରୟ କରିଥିଲେ ଏବଂ ପରେ ବି ୩୬,୦ ଟଙ୍କାରେ ଯୋଗ ଦିଅନ୍ତି । ବର୍ଷ ଶେଷରେ ଲାଭକୁ ସମାନ ଭାବରେ ବୟନ କରାଗଲେ B କେତେ ମାସ ପରେ ଯୋଗ ଦେଲେ?

a) 3

b) 4

c) 5

d) 6

e) None of these

Suppose B joined after x months.

Then, 21000×12=36000×(12 - x)

⇒,36x=180

 $\Rightarrow x = 5$

Questions 42:

X and Y invested in a business. They earned some profit which they divided in the ratio of 2: 3. If X invested Rs.40,000. the amount invested by Y is

X ଏବଂ Y ଏକ ବ୍ୟବସାୟରେ ନିବେଶ କରିଥିଲେ। ସେମାନେ କିଛି ଲାଭ ଅର୍ଚ୍ଚନ କରିଥିଲେ ଯାହାକୁ ସେମାନେ 2: 3 ଅନୁପାତରେ ବିଭକ୍ତ କରିଥିଲେ ଯଦି X 40,000 ଟଙ୍କା ବିନିଯୋଗ କରିଥିଲେ। Y ଦ୍ୱାରା ବିନିଯୋଗ କରାଯାଇଥିବା ରାଶି ହେଉଛି

D) Data Inadequate

A, B and C enter into a partnership with capitals in the ratio 5: 6: 8. At the end of the business term, they recieved the profits in the ratio 10: 15: 24. Find the ratio of time in which they contributed their capitals.

A) 8:5:6

B) 4:5:6

C) 5:6:4

D)8:5:6

A and B started a business in partnership by investing Rs. 20,000 and Rs. 15.000, respectively. After six months, C joined them with Rs. 20,000. What will be B's share in the total profit of Rs. 25,000 earned at the end of 2 years from the starting of the business?

A) Rs. 7500

B) Rs. 9000

C) Rs. 9500

D) Rs. 10,000

In a partnership firm, capital contribution by A, B and C is in the ratio of 4:2:1 respectively. Return on investment after a year is 14% on the initial capital of Rs. 800000 by A, B and C combined. What is the share in return (in Rs.) for B?

(a) Rs. 14000

(b) Rs. 26000

(c) Rs. 32000

(d) Rs. 16000

A, B, C, enter into a partnership. A contributes Rs.3,20,000 for 4 months, B contributes Rs.5,10,000 for 3 months and C contributes Rs.2,70,000 for 5 months. If the total profit be Rs.1,24,800, then A's share of profit is:

A) Rs.38,400

B) Rs.45,900

C) Rs.40,500

D) Rs.41,500

Percentage

TRICKY DOSE

ବୃଦ୍ଧି ହେଲେ	କମି ହେଲେ
$100 \xrightarrow{+10\%} 110$ $100 \xrightarrow{+20\%} 120$	

Questions 1:

What percentage will the number 24 120 be ୨୪, ୧୨୦ ସଂଖ୍ୟାର କେତେ ପ୍ରତିଶତ ହେବ

$$\frac{24}{120} \times 100 = 20\%$$

Questions 2:

What is the percentage of 3kg to 150 grams ୩ କେଢିରୁ ୧୫୦ ଗ୍ରାମର ପ୍ରତିଶତ କେତେ

$$\frac{150}{3000} \times 100 = 5\%$$

3 kg = 3000 ଗ୍ରାମ ଇକାଇ ସମାନ କରନ୍ତୁ

Questions 3:

What will be 40% of the number 120 ୧୨୦ ନମ୍ବରର ୪୦% କ'ଶ ହେବ

$$\frac{120 \times 40}{100} = 48$$

% ଯଦି ଦିଆଯାଇଥିବ 100 ରେ ଭାଗ କରାଯାଇଥାଏ

Questions 4:

What will be 20% of 12% of the number 2000

$$2000 \times \frac{12}{100} \times \frac{20}{100} = 48$$

Questions 5:

Convert the fraction into a percentage

ଅଂଶକୁ ଏକ ପ୍ରତିଶତରେ ରୂପାନ୍ତରିତ କରନ୍ତୁ

(i)
$$\frac{2}{5} \frac{2}{5} \times 100 = 40\%$$

(ii) $\frac{4}{5} \frac{4}{5} \times 100 = 80\%$

Questions 6:

If 16 percent of a number is 48 then that number will be

ଯଦି ଏକ ସଂଖ୍ୟାର ୧୬ ପ୍ରତିଶତ ୪୮ ତେବେ ସେହି ସଂଖ୍ୟା ହେବ

$$\begin{array}{rr}
 16\% & \longrightarrow 48 \\
 1\% & 4\frac{48}{16} \\
 100\% & 3 \times 100 = 300
 \end{array}$$

Questions 7:

There are 500 students in a class. If 450 students have passed, then Find the percentage of fail

ଗୋଟିଏ ଶ୍ରେଣୀରେ ୫୦୦ ଛାତ୍ରଛାତ୍ରୀ ଅଛନ୍ତି। ଯଦି ୪୫୦ କଣ ଛାତ୍ରଛାତ୍ରୀ ପାସ୍ କରିଛନ୍ତି, ତେବେ ଫେଲ୍ ର ପ୍ରତିଶତ ଜଣାନ୍ତୁ

Fail =
$$500 - 450 = 50$$

Fail % = $\frac{50}{500} \times 100 = 10\%$

Questions 8:

The integer of a number is 600 digits. If a student gets 480 marks, Find its percentage ଏକ ସଂଖ୍ୟାର ପୂର୍ଣ୍ଣାଙ୍ଗ ହେଉଛି ୬୦୦ ଅଙ୍କ ବିଶିଷ୍ଟ । ଯଦି କୌଣସି ଛାତ୍ର ୪୮୦ ମାର୍କ ପାଆନ୍ତି, ତେବେ ଜାଣନ୍ତୁ ଏହାର ପ୍ରତିଶତ କେତେ

$$\frac{480}{600} \times 100 = 80\%$$

Questions 9:

A class has a total of 2000 students. If the percentage of boys is 60% then Find the number of girls

ଗୋଟିଏ କ୍ଲାସରେ ମୋଟ ୨୦୦୦ ଛାତ୍ରଛାତ୍ରୀ ପାଠ ପଢ଼ୁଛନ୍ତି । ଯଦି ପ୍ରଅଙ୍କ ପତିଶତ ୬୦ ଅଛି ତେବେ ଜାଣନ୍ତ ଝିଅଙ୍କ ସଂଖ୍ୟା

$$2000 \ 40 = 2000 \times \frac{40}{100} = 800$$

Questions 10:

10 percent of his income by an individual on education, 20 percent food But spend 40 percent on clothes, if his savings are 2700, then what will be the total income

କଣେ ବ୍ୟକ୍ତି ନିଜର ଆୟର ୧୦ ପ୍ରତିଶତ ଶିକ୍ଷା, ୨୦ ପ୍ରତିଶତ ଖାଦ୍ୟ କିନ୍ତୁ ପୋଷାକ ପାଇଁ ୪୦ ପ୍ରତିଶତ ଖର୍ଚ୍ଚ କରନ୍ତୁ, ଯଦି ତାଙ୍କ ସଞ୍ଚୟ ୨୭୦୦, ତେବେ ମୋଟ ଆୟ କେତେ ହେବ

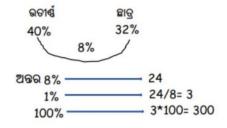
Boys	Girls	
60%	40%	
2000 ର 40 ପ୍ରତିଶତ =	$2000 \times \frac{40}{100} = 800$	
ମନେରଖନ୍ତୁ ଟୋଟାଲ ସବୁଦ	ବଲେ 100 ରେ ହୋଇଥାଏ	

Questions 11:

In an election, the winning candidate got 60 percent votes and if he won by 1800 votes then how many votes did he get in the election? ଗୋଟିଏ ନିର୍ବାଚନରେ ବିଜୟୀ ପ୍ରାର୍ଥୀଙ୍କୁ ୬୦ ପ୍ରତିଶତ ଭୋଟ୍ ମିଳିଥିଲା ଏବଂ ଯଦି ସେ ୧୮୦୦ ଭୋଟ୍ ରେ ବିଜୟୀ ହୁଅନ୍ତି ତେବେ ସେ ନିର୍ବାଚନରେ କେତେ ଭୋଟ୍ ପାଇଥିଲେ?

Questions 12:

To pass an exam, it is mandatory to get 40 percent marks, if a student got 32 percent marks and failed by 24 points, then how much was the completer of the exam ପରୀକ୍ଷାରେ ଉତ୍ତୀର୍ଷ୍ଣ ହେବାକୁ ହେଲେ ୪୦ ପ୍ରତିଶତ ମାର୍କ ରହିବା ବାଧ୍ୟତାମୂଳକ, ଯଦି କଣେ ଛାତ୍ର ୩୨ ପ୍ରତିଶତ ମାର୍କ ପାଇ ୨୪ ପଏୟରେ ଫେଲ୍ ହଅନ୍ତି, ତେବେ ପରୀକ୍ଷା ଶେଷ କେତେ ଥିଲା



Questions 13:

In an examination, 80 percent students passed in Hindi and 85 percent If you passed in Mathematics and passed in both 75%, find the percentage of failure.

ଗୋଟିଏ ପରୀକ୍ଷାରେ ହିନ୍ଦୀରେ ୮୦ ପ୍ରତିଶତ ଓ ଗଣିତରେ ପାସ୍ କରି ଉଭୟ ୭୫ ପ୍ରତିଶତରେ ପାସ୍ କଲେ ଫେଲ୍ ର ପ୍ରତିଶତ ଜଣାପଡ଼ିବ।

Questions 14:

The population of a village is 8000 . If there is a 10 percent increase every year, then what will be the population after 2 years ଗୋଟିଏ ଗାଁର ଜନସଂଖ୍ୟା ୮୦୦୦ । ଯଦି ପ୍ରତିବର୍ଷ ୧୦ ପ୍ରତିଶତ ବୃଦ୍ଧି ହୁଏ, ତେବେ ୨ ବର୍ଷ ପରେ ଜନସଂଖ୍ୟା କ'ଣ ହେବ

$$100$$
 $+10$ 110 210

Questions 15:

The value of a fridge is 12800 if there is a 20 percent depreciation per year then what was the price 2 years ago ଗୋଟେ ଫ୍ରିକ ର ମୂଲ୍ୟ ୧୨୮୦୦ ଯଦି ବର୍ଷକୁ ୨୦ ପ୍ରତିଶତ ଅବକ୍ଷୟ ହୁଏ ତେବେ ୨ ବର୍ଷ ତଳେ ଫ୍ରିକର ମୂଲ୍ୟ କ'ଣ ଥିଲା

Questions 16:

A number is increased by 10 percent first and later by 20 percent decrease then, what is the percentage change in the value of the number if it is reduced

ପ୍ରଥମେ ଏକ ସଂଖ୍ୟା ୧୦ ପ୍ରତିଶତ ଏବଂ ପରେ ୨୦ ପ୍ରତିଶତ ହ୍ରାସ କରାଯାଏ, ଯଦି ଏହାକୁ ହ୍ରାସ କରାଯାଏ ତେବେ ସଂଖ୍ୟାର ମୂଲ୍ୟରେ କେତେ ପ୍ରତିଶତ ପରିବର୍ତ୍ତନ ହୁଏ

Questions 17:

If the length of a rectangle is increased by 10 percent and the width is reduced by 10 percent, then what percentage of the area will change.

ଯଦି ଏକ ଆକାରର ଦୈର୍ଘ୍ୟ ୧୦ ପ୍ରତିଶତ ବୃଦ୍ଧି କରାଯାଏ ଏବଂ ପ୍ରସ୍ଥ ୧୦ ପ୍ରତିଶତ ହ୍ରାସ କରାଯାଏ, ତେବେ ଜମିର କେତେ ପ୍ରତିଶତ ପରିବର୍ତ୍ତନ ହେବ ।

$$110 \times 90 = 5\%$$

$$11 \times 9 = 99$$
 ତାହେଲେ 1% ର କମି

Questions 18:

If A's income is 20 percent more than B's then what percentage of B's income is less than A's income.

ଯଦି A ର ଆୟ B ଠାରୁ 20 ପ୍ରତିଶତ ଅଧିକ ଅଟେ ତେବେ B ର ଆୟର କେତେ ପ୍ରତିଶତ A' ଠାରୁ କମ୍ ଅଟେ ।

A B 120 100
$$100$$
 B, A ଠାରୁ କେତେ କମ ଅଟେ
$$\frac{20}{120} \times 100 = 16\frac{2}{3}\%$$
 ମନେ ରଖନ୍ତୁ (କମ/ଅଧିକା ସବୁବଲେ ଅନ୍ତର ବତେଇଥାନ୍ତି)

Questions 19:

A 400 liter solution (mixture) contains 10% water and add how many liters of water to make it 20%

ଏକ ୪୦୦ ଲିଟର ଦ୍ରବଣ (ମିଶ୍ରଣ)ରେ ୧୦% ପାଣି ଥାଏ ଏବଂ ଏଥିରେ କେତେ ଲିଟର ପାଣି ମିଶାଇ ୨୦% ତିଆରି କରାଯାଏ

SALT	WATER
90%	10%
80%	20%
	$\frac{90}{80} \times 400 = 450$ liter
Then \	Water = $450 - 00 = 50$ leter

Questions 20:

20000 Rs. 20% of 15% of 10% will be 20000
$$20000 \times \frac{20}{100} \times \frac{15}{100} \times \frac{10}{100} = 60$$

Questions 21:

In a test, some students took the Hindi subject and some students took, Some took English subjects and some took both subjects. If 80% of the students took Hindi subjects and half of the students took English subjects, then what percentage of students took both subjects ପରୀକ୍ଷାରେ କିଛି ଛାତ୍ରଛାତ୍ରୀ ହିନ୍ଦୀ ବିଷୟ ନେଇଥିବା ବେଳେ କିଛି ଛାତ୍ରଛାତ୍ରୀ ହିନ୍ଦୀ ବିଷୟ ନେଇଥିବା ବେଳେ କିଛି ଭଭୟ ବିଷୟ

A man buys an article for 20% less than its value and sells it for 20% more than its value.

His profit or loss percent is?

A) 22.5%

B) 30%

C) 42%

D) 50%

The ratio of the cost price and selling price of a shirt is 32: 37. What is the profit percent?

A. 15.63

B. 13.51

C. 17.21

D. 14.44

If a Mohan sells a pen and earns 20% of profit, then what is its actual profit percentage?

A) 20%

B) 10%

C) 15%

D) 25%

A person sells an article at a profit of 12%. If he had purchased it for 12% less and sold it for Rs.9 less, he would have gained 27%. What is the original cost price of the article?

A) Rs.4,250

B) Rs.4,000

C) Rs.4,500

D) Rs.3,750

The ratio of the cost price and the selling price of an article is 5:7, then percentage profit if the selling price is doubled will be:

A) 40%

B) 80%

C) 28%

D) 180%

A shopkeeper earns 12% profit on one apple, the percentage profit on 12 apple will be:

A) 1%

B) 12%

C) 144%

D) 6%

DISCOUNT

Questions 1:

Successive discounts of 10% and 30% are equivalent to a single discount of : କ୍ରମାଗତ ୧୦% ଏବଂ ୩୦% ରିହାତି ଗୋଟିଏ ରିହାତି ସହିତ ସମାନ ଅଟେ

(1) 40%

(2) 35%

(3) 38%

(4) 37%

Equivalent Discount

$$=30+10-\frac{30\times10}{100}=37\%$$

Questions 2:

List price of an article at a show room is ₹ 2,000 and it is being sold at successive discounts of 20% and 10%. Its net selling price will be : ସୋ'ରୁମ୍ରେ ଗୋଟିଏ ସାମଗ୍ରୀର ଲିଷ୍ଟ ମୂଲ୍ୟ ୨,୦୦୦ ଟଙ୍କା ଏବଂ ଏହା କ୍ରମାଗତ ୨୦% ଏବଂ ୧୦% ରିହାତିରେ ବିକ୍ରି ହେଉଛି। ଏହାର ନିଟ୍ ବିକ୍ୟ ମୂଲ୍ୟ ହେବ

(1) ₹ 1900

(2) ₹ 1700

(3) ₹ 1440

 $(4) \ge 1400$

Equivalent discount for successive discounts of 20% and 10%

$$= \left[20 + 10 - \frac{20 \times 10}{100}\right] \%$$
= 28%
∴ Net selling price = 72% of 2000
$$= ₹ \frac{72 \times 2000}{100} = ₹1440$$

Questions 3:

The difference between a discount of 40% on 500 and two successive discounts of 30% and10% on the same amount is ୫୦୦ ଟଙ୍କା ଉପରେ ରିହାତି ମଧ୍ୟରେ ପାର୍ଥକ୍ୟ ୪୦% ଏବଂ ସମାନ ରାଶି ଉପରେ କ୍ରମାଗତ ୩୦% ଏବଂ ୧୦% ର ଦୁଇଟି ରିହାତି କେତେ ହେବ

(1) ₹ 15

(2) ₹ 0

(3) ₹ 20

(4) ₹ 10

Single equivalent discount of two consecutive discount of 30% and 10%

1. Touch: Feel:: Greet:?

ସୂର୍ଶ : ଅନୁଭବ :: ଅଭିନନ୍ନନ : ?

(a) Smile/ହସ

(b) Acknowledge/ସ୍ୱୀକାର କର

(c) Success/ସଫଳତା

(d) Manners/ଶିଷ୍ଠାଚାର

Answer: (b) Acknowledge/ସ୍ୱୀକାର କର

2. House: Room:: World:?

ଘର : କକ୍ଷ :: ବିଶ୍ୱ : ?

(a) Land/ଭୂମି

(b) Sun/ସୂର୍ଯ୍ୟ

(c) Air/ବାତାସ

(d) Nation/ଜାତି

Answer: (d) Nation/ଜାତି

3. Carbon: Diamond:: Corundum:?

କାର୍ବନ : ଡାୟମଣ୍ଡ :: କୋରୁଣ୍ଡମ : ?

(a) Garnet/ଗାର୍ନେଟ

(b) Ruby/ମାଣିକ୍ୟ

(c) Pukhraj/ସ୍ଥଖରାଜ

(d) Pearl/ମୋତି

Answer: (b) Ruby/ମାଣିକ୍ୟ

4. Smoke: Pollution:: War:?

ଧୁଆଁ : ପ୍ରଦୂଷଣ :: ଯୁଦ୍ଧ : ?

(a) Victory/ବିଜୟ

(b) Peace/ଶାନ୍ତି

(c) Treaty/ସନ୍ନି

(d) Destruction/মুগ্ৰ

Answer: (d) Destruction/มูช

5. lnk : Pen :: Blood : ?

କାଲି : କଲମ :: ରକ୍ତ : ?

(a) Vein/ନଶା

(b) Wound/ଘାଉ

(c) Body/ଶରୀର

(d) Circulation/ସରିବାହ

Answer: (a) Vein/ค๗

6. Breeze: Cyclone:: Drizzle:?

ସୁସ୍ବାସ : ଘୂର୍ଣ୍ଣବାତ୍ୟା :: ରିମଝିମ ବର୍ଷା : ?

(a) Storm/ଝଡ଼

(b) Cloud/คราฉ

(c) Thunder/ତଡିତ୍

(d) Downpour/ଭାରୀ ବର୍ଷା

Answer: (d) Downpour/ଭାରୀ ବର୍ଷା

7. Train: Track:: Bullet:?

ଟ୍ରେନ୍ : ଲାଇନ୍ :: ଗୁଳି : ?

(a) Gun/ବନ୍ କ

(b) Target/ଲକ୍ଷ୍ୟ

(c) Aim/ଅଭିପ୍ରାୟ

(d) Shoot/ଗୋଳିଚାଳନ

Answer: (b) Target/ଲକ୍ଷ୍ୟ

8. Leg: Walk:: Ear:?

ପାଦ : ଚାଲିବା :: କାନ : ?

(a) Listen/ଶୁଣ

(b) Speak/କହିବା

(c) Hear/ଶୁଣିବା

(d) Ignore/ଅନଦା

Answer: (c) Hear/ଶୁଣିବା

9. Book: Library:: Coin:?

ପୁସ୍ତକ : ଗ୍ରନ୍ଥାଗାର :: ମୁଦ୍ରା : ?

(a) Mint/กิสุ

(b) Museum/ସଂଗୁହାଳୟ

(c) Pocket/ଜେବ

(d) Bank/ବ୍ୟାଙ୍କ

Answer: (d) Bank/ବ୍ୟାଙ୍କ

10. Horse: Stable:: Ship:?

ଘୋଡ଼ା : ଅସ୍ତବଳ :: ଜାହାଜ : ?

(a) Port/ବନ୍ର

(b) Cabin/କ୍ୟାବିନ

(c) Harbor/খাব্র

(d) Dock/ଡକ୍

Answer: (d) Dock/ଡକ୍

11. Telescope: Astronomer:: Microscope:?

ଦୂରବୀନ : ଖଗୋଳବିଜ୍ଞାନୀ :: ମାଇକ୍ରୋସ୍ଲୋପ : ?

(a) Doctor/ଡାକ୍ତର

(b) Scientist/ବୈଜ୍ଞାନିକ

(c) Pathologist/ପ୍ୟାଥୋଲଜିଷ୍ଠ

(d) Surgeon/ଶଳ୍ୟ ଚିକିତ୍କ

Answer: (c) Pathologist/ପ୍ୟାଥୋଲଜିଷ୍ଟ

12. Poet: Poem:: Sculptor:?

କବି : କବିତା :: ଶିଳ୍ପୀ : ?

(a) Canvas/କ୍ୟାନଭାସ

(b) Marble/ସାଥର

(c) Statue/গৃত্তি

(d) Clay/ମାଟି

Answer: (c) Statue/ภูติ์

13. River: Water:: Mine:?

ନଦୀ : ଜଳ :: ଖଣି : ?

(a) Coal/କୋଇଳା

(b) Rock/ସାଥର

(c) Mountain/ପର୍ବତ

(d) Mineral/ଖନିଜ

Answer: (d) Mineral/ଖନିଜ

14. Lion: Pride: Sheep:?

ସିଂହ : ଗର୍ବ :: ରାମ୍ରା : ?

(a) Herd/ଝୁରି

(b) Group/ସମ୍ମର୍କୀୟ ଭାଇ ଭଉଣୀ

(c) Flock/ସାଳ

(d) Crowd/ଭିଡ଼

Answer: (c) Flock/aเค

15. Fire: Heat:: Ice:?

ଅଗ୍ନି : ତାପ :: ବରଫ : ?

(a) Cold/ତଣ୍ଡା

(b) Water/ପାଣି

(c) Snow/ହିମ

(d) Melt/ଗଲନ

Answer: (a) Cold/ତଣ୍ଣା

16. Elephant: Ivory:: Shark:?

ହାତୀ : ହାତୀଦାନ୍ତ :: ମାଛ : ?

(a) Fin/g

(b) Teeth/ଦାନ୍ତ

(c) Skin/อฏ

(d) Tail/ପୁଛ

Answer: (b) Teeth/ଦାନ୍ତ

17. Pen: Write:: Knife:?

କଲମ : ଲେଖନ :: ଛୁରୀ : ?

(a) Cut/କାଟିବା

(b) Sharpen/ତୀକ୍ଷଣ କରିବା

(c) Hold/ଧରିବା

(d) Point/ତୀକ୍ଷ୍ମ

Answer: (a) Cut/କାଟିବା

18. Jupiter : Planet :: Himalaya : ?

ବୃହସୃତି : ଗ୍ରହ :: ହିମାଲୟ : ?

(a) lce/ହିମ

(b) Hill/ପାହାଡ

(c) Continent/ମହାଦେଶ

(d) Mountain/ପର୍ବତ

Answer: (d) Mountain/ପର୍ବତ

19. Heart : Blood :: Lungs : ?

ହୃଦୟ : ରକ୍ତ :: ଫେଫଡ଼ା : ?

(a) Oxygen/ଅକ୍ଲିଜେନ

(b) Air/ବାତାସ

(c) Carbon dioxide/କାର୍ବନ ଡାଇଅକାଇଡ୍

(d) Breathe/ଶ୍ୱାସ

Answer: (d) Breathe/ଶ୍ୱାସ

20. Thirsty: Water:: Hungry:?

ତରସ : ପାଣି :: ଭୁଖା : ?

(a) Food/ଖାଦ୍ୟ

Relationship	Symbol
Men	A
Women	B
Husband and wife	+
Brother – sister or cousins	←→
Generation (father and son)	↓

Relationship Format

Expanded Relationship	Direct
Expanded Relationship	Relationship
Mother's or Father's Son	Brother
Mother's or Father's	Sister
	Sister
Daughter	- 15 1
Mother's or Father's	Grandfather
Father	
Mother's or Father's	Grandmother
Mother	
Son's Wife	Daughter-in-Law
Daughter's Husband	Son-in-Law
Husband's or Wife's	Sister-in-Law
Sister	VL VO
Husband's or Wife's	Brother-in-Law
Brother	
Brother's or Sister's Son	Nephew
Brother's or Sister's	Niece
Daughter	D
Uncle's or Aunt's	Cousin
Daughter/Son	
Brother's Wife	Sister-in-Law
Sister's Husband	Brother-in-Law
Grandson's or	Great
Granddaughter's	Grandson/Grand
Son/Daughter	daughter

How to solve questions

1. Understand Basic Relationships

First, be familiar with the basic family relationships. Here's a quick overview:

• Father/Mother: Parent

· Brother/Sister: Sibling

· Son/Daughter: Child

Uncle/Aunt: Parent's sibling

• Nephew/Niece: Brother's/Sister's child

Cousin: Uncle's/Aunt's child

 Grandfather/Grandmother: Parent's father/mother

• In-laws: Husband's or wife's relatives

2. Use a Family Tree

- Draw a family tree to visualize relationships.
 This makes it easier to trace connections between people.
- Use symbols like M for male and F for female.
- Use arrows to show the direction of relationships.

3. Generation Gap

- Identify the generation gap to figure out relationships quickly. For example:
 - Same generation: Brother, Sister, Cousin
 - One generation above: Father, Mother. Uncle. Aunt
 - One generation below: Son, Daughter, Nephew, Niece

4. Code Relationships

Father: +1 generation

Son/Daughter: -1 generation

• Brother/Sister: Same generation

 Husband/Wife: Same generation, just a connection of marriage

5. Identify Gender Correctly

- Look for gender-specific clues in the question, such as:
 - o He/She
 - o Son/Daughter
 - Brother/Sister
- If gender is not explicitly mentioned, be cautious while assigning relationships.

6. Common Terminologies

- Paternal: Related to father's side
- Maternal: Related to mother's side
- In-law: Related through marriage

7. Try Backtracking

- Start solving the question from the last piece of information provided and move backward.
- This technique is helpful when multiple relationships are described in a single question.
- 8. Use Symbols for Better Understanding
 - Male: Use + or write M
 - Female: Use or write F
 - Generation above: Use ↑
 - Generation below: Use ↓
- 9. Practice Common Scenarios

There are some frequently occurring relationships. Practice the common ones to improve speed:

- Aunt/Uncle questions
- Cousins
- In-law relationships

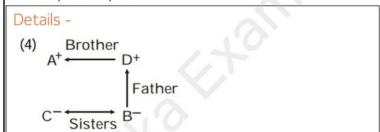
Practice Questions Answer

A is D's brother. D is B's father. B and C are sisters. How is A related to C?

A ହେଉଛି D ଙ୍କ ଭାଇ। D ହେଉଛି B ଙ୍କ ବାପା। B ଏବଂ C ହେଉଛନ୍ତି ଭଉଣୀ। A କେମିତି C ସହିତ ସମୁର୍କିତ?

- A) Son / বুখ
- B) Grandson / ପୁଅ-ନାତି
- C) Father / ବାପା
- D) Uncle / କକା

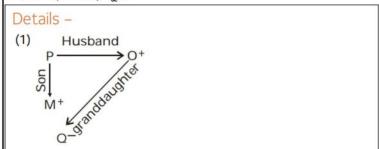
Ans: D) Uncle / କକା



2. M is the son of P. Q is the granddaughter of O, who is the husband of P. How is M related to O? M ହେଉଛି P କ ପୁଆ Q ହେଉଛି O କ ପୁଅ-ନାତି, ଯିଏ P କ ସ୍ଟାମା M କେମିତି O ସହିତ ସମ୍ପର୍କିତ?

- A) Son / বুখ
- B) Daughter / ପୁଅ-ନାତି
- C) Mother / ภเ
- D) Father / ବାପା

Ans: A) Son / বুখ

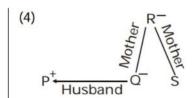


3. If P is the husband of Q and R is the mother of S and Q, what is R to P?

ଯଦି P ହେଉଛି Q ଙ୍କ ସ୍ବାମୀ ଏବଂ R ହେଉଛି S ଏବଂ Q ଙ୍କ ମା, R କେମିତି P ସହିତ ସମୁର୍କିତ?

- A) Mother / ภเ
- B) Sister / ଭଉଣା
- C) Aunt / କକୀ
- D) Mother-in-law / ସାମି-ମା

Details -



4. A is B's brother, C is A's mother, D is C's father, E is B's son. How is D related to E?

A ହେଉଛି B ଙ୍କ ଭାଇ, C ହେଉଛି A ଙ୍କ ମା, D ହେଉଛି C ଙ୍କ ବାପା, E ହେଉଛି B ଙ୍କ ପୁଆ D କେମିତି E ସହିତ ସମ୍ମର୍କିତ?

- A) Grandson / ନାତି
- B) Great Grandson / ବଡ଼ ନାତି
- C) Great Grandfather / ବଡ଼ ବାସା
- D) Grandfather / ବାସା

Ans: C) Great Grandfather / ବଡ଼ ବାପା

Details -

D is the father of C.

C is mother of A and B.

E is son of B.

Therefore, D is great grandfather of E

5. X and Y are the children of A. A is the father of X but Y is not his son. How is Y related to A?

X ଏବଂ Y ହେଉଛି A ଙ୍କ ଶିଶୁ। A ହେଉଛି X ଙ୍କ ବାପା କିନ୍ତୁ Y ହେଉଛି ସେହି ସ୍ଥାନରେ ପୁଅ ନୁହୋଁ Y କେମିତି A ସହିତ ସମ୍ବର୍କିତ?

- A) Sister / ଭଉଣୀ
- B) Brother / ଭାଇ
- C) Son / বুখ
- D) Daughter / ଝିଅ

Ans: D) Daughter / ଝିଅ

X and Y are children of A. Y is not son of A.

Therefore, Y is daughter of A.

A and B are brothers. E is the daughter of F. F is the wife of B. What is the relation of E to A?

A ଏବଂ B ହେଉଛନ୍ତି ଭାଇ। E ହେଉଛି F ଙ୍କ ଝିଆ F ହେଉଛି B ଙ୍କ ସ୍ତ୍ରା E କେମିତି A ସହିତ ସମୁର୍କିତ?

- A) Sister / ଭଉଣା
- B) Daughter / ପୁଅ-କୁଆ
- C) Niece / ଭ୍ୟଜା

D) Sister-in-law / ଭାଇ-ଭଉଣୀ

Ans: C) Niece / ଭ୍ୟଜା

Details

(3)
$$A^{+} \xrightarrow{Brother} B^{+} \xrightarrow{Wife} F^{-}$$
Daughter \downarrow
 E^{-}

A's mother is the sister of B and has a daughter C. How can A be related to B from among the following?

A ଙ୍କ ମା ହେଉଛି B ଙ୍କ ଭଉଣା ଏବଂ C ନାମକ ଏକ ଝିଅ ରଖିଛନ୍ତି। A କେମିତି B ସହିତ ସମ୍କର୍କିତ?

- A) Niece / ଭ୍ୟଜା
- B) Uncle / କକା
- C) Daughter / ଝିଅ
- D) Father / ବାପା

Ans: A) Niece / ଭ୍ୟଜା

The mother of A is sister of B.

Therefore, A may be niece of B.

A is D's brother. D is B's father. B and C are sisters. How is C related to A?

A ହେଉଛି D ଙ୍କ ଭାଇ। D ହେଉଛି B ଙ୍କ ବାପା। B ଏବଂ C ହେଉଛନ୍ତି ଭଉଣୀ। C କେମିତି A ସହିତ ସମ୍ମର୍କିତ?

- A) Cousin / ସମ୍ମର୍କୀୟ ଭାଇ ଭଉଣୀ
- B) Niece / ଭ୍ୟଜା
- C) Aunt / କକୀ
- D) Nephew / ଭାଇ

Ans: B) Niece / ଭ୍ରଣଜା

D is father of B and C.

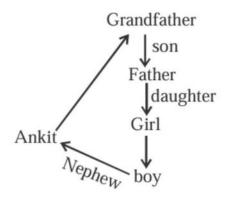
A is brother of D.

B and C are daughters of D.

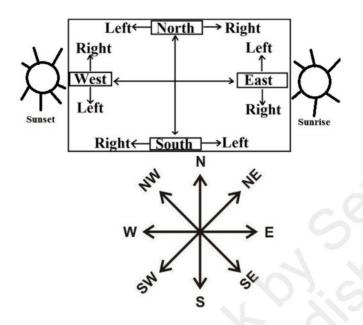
Therefore, C is niece of A.

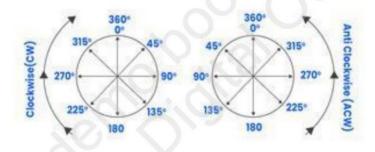
R and S are brothers, X is the sister of Y and X is the mother of R. What is Y to S?

R ଏବଂ S ହେଉଛନ୍ତି ଭାଇ, X ହେଉଛି Y କ ଭଉଣୀ ଏବଂ X ହେଉଛି R କ ମାା Y କେମିତି S ସହିତ ସମୁର୍କିତ?



Direction distance





1. Understand the Main Directions

- North (N)
- South (S)
- East (E)
- West (W)

And their intermediate directions:

- North-East (NE)
- North-West (NW)
- South-East (SE)
- South-West (SW)

A quick diagram of these directions will help you visualize movements.

2. Use a Compass or Diagram

- Always draw a compass or direction chart with North at the top, South at the bottom, East on the right, and West on the left.
- Mark each movement step by step on this compass to track the position correctly.

3. Break Down Movements

In direction questions, it's important to break down movements into steps. For example:

If a person walks 10 km North and then 5 km
East, first note down the North movement
and then mark the East movement from the
new position.

4. Turn Left/Right Movements

When a question mentions turning left or right, always assume that the person is facing a certain direction:

- If facing North:
 - Left = West
 - Right = East
- If facing South:
 - Left = East
 - Right = West
- If facing East:

- Left = North
- o Right = South
- If facing West:
 - Left = South
 - o Right = North

5. Use Pythagoras Theorem

If the question asks for the shortest distance between two points (forming a right-angled triangle), apply the Pythagoras theorem:

- Formula: Shortest distance (d) = $\sqrt{(x^2 + y^2)}$
 - Where x is the distance moved horizontally (East-West) and y is the distance moved vertically (North-South).

Example:

A person moves 6 km North and then 8 km East. The shortest distance back to the starting point would be:

 $d=(62+82)=(36+64)=100=10 \text{ km} \text{W} \text{text} \{d\} = \text{W} \text{sqrt} \{(6^2+8^2)\} = \text{W} \text{sqrt} \{(36+64)\} = \text{W} \text{sqrt} \{100\} = 10 \text{W}, \text{kmd} = (62+82) = (36+64) = 100 = 10 \text{km}.$

6. Focus on Final Direction

Many questions will ask you to determine the final direction a person is facing after multiple turns or movements. To solve these:

- Keep track of each change in direction (left or right turns) systematically.
- After every movement, update the person's direction on your diagram or mentally visualize it.

7. Opposite Directions

If a person moves in one direction and then turns 180 degrees, they will face the opposite direction:

- North
 → South
- East ↔ West

8. Practice Common Scenarios

Here are some common movement scenarios with their direction changes:

- Moving North and turning right means moving East.
- Moving East and turning right means moving South.
- Moving South and turning left means moving East.

9. Keep Track of Distances

- Add or subtract distances logically. If a person walks 10 km North and 5 km South, their net movement is 5 km North.
- Similarly, if they move 8 km East and 3 km
 West, their net movement is 5 km East.

Assumptions Related to Direction Reasoning

- The main direction change undergoes a 90° change in direction. For instance, there is a 90° change from East to North / South.
- The change is only 45° change in cardinal direction. For example, there is a 45° change in North to North – East or North to North – West.
- The direction of the right turn is always clockwise.

- The direction of the left turn is always anticlockwise.
- The problem on the distance covered or the minimal distance between two points in direction reasoning is solved by using the concept of Pythagoras theorem.
- All these distances are along straight lines and between specified points.

Left - Right Movements

Let us understand the various clock-wise and anticlockwise turns in direction reasoning.

- A person facing towards North, on taking left turn will face towards West.
- On taking a right turn the person will face towards East if he was facing towards North earlier.
- A person facing towards South, on taking left turn will face towards East.
- On taking a right turn, the person will face
 West if he was facing towards South earlier.
- A person facing towards East, on taking left turn will face towards North.
- On taking a right turn, the person will face
 South if he was facing towards East earlier.
- A person facing towards West, on taking left turn will face towards South.
- On taking a right turn, the person will face
 North if he was facing towards West earlier.
- A person facing towards North West, on taking left turn will face towards South – West.

- On taking a right turn, the person will face
 North East if he was facing towards North –
 West earlier.
- A person facing towards North East, on taking left turn will face towards North – West.
- On taking a right turn, the person will face
 South East if he was facing towards North –
 East earlier.
- A person facing towards South East, on taking left turn will face towards North – East.
- On taking a right turn, the person will face
 South West if he was facing towards South –
 East earlier.
- A person facing towards South West, on taking left turn will face towards South – East.
- On taking a right turn, the person will face
 North West if he was facing towards South –
 West earlier.

The above result can be summarized as

Original	Direction after taking a turn	
Direction	Right Turn	Left Turn
North	East	West
East	South	North
West	North	South
South	West	East
North-East	South-East	North-West
North-West	North-East	South-West
South-East	South-West	North-East
South-West	North-West	South-East

Important Facts Related to Direction Reasoning

- (c) 42 m, North / 42 ମିଟର, ଉତ୍ତର
- (d) 27 m, South / 27 ମିଟର, ଦକ୍ଲିଣ

Ans: (b) 47 m, East / 47 ମିଟର, ପୂର୍ବ

- 21. One evening before sunset Mamata and Sita were talking to each other face to face. If Sita's shadow was exactly to the right of Sita, which direction was Mamata facing? ଏକ ସଂଧ୍ୟାରେ, ସୂର୍ଯ୍ୟାସ୍ତ ହେବାରୁ ପୂର୍ବରୁ ମମତା ଏବଂ ସିତା ଏକାଏକା ମୁହଁମୁହଁ ଆଲୋଚନା କରୁଥିଲେ। ଯଦି ସିତାଙ୍କର ଛାୟା ସିତାଙ୍କର ଦାହିଣକୁ ସଠିକ୍ ଥିଲା, ତେବେ ମମତା କେଉଁ ଦିଶାରେ ମୁହଁ ଦେଉଛନ୍ତି?
- (a) North / ଉତ୍ତର
- (b) South / ଦକ୍ଲିଣ
- (c) East / ପୂର୍ବ
- (d) Data is inadequate / ତଥ୍ୟ ଅକ୍ଷୟ

Ans: (b) South / ଦକ୍ଷିଣ

- 22. A boy rode his bicycle Northward, then turned left and rode 1 km and again turned left and rode 2 km. He found himself 1 km west of his starting point. How far did he ride in the first direction? ଗୋଟିଏ ଛୋକରା ଉତ୍ତରକୁ ତାଙ୍କର ବାଇସିକ୍ଲ ଚଳାଇଥିଲେ, ପରେ ବାମକୁ ମୋଡ଼ି 1 କି.ମି. ଚାଲିଥିଲେ ଏବଂ ପୁନରାୟ ବାମକୁ ମୋଡ଼ି 2 କି.ମି. ଚାଲିଥିଲେ। ସେ ତାଙ୍କର ଆରମ୍ଭ ସ୍ଥାନରୁ 1 କି.ମି. ପଶ୍ଚିମରେ ଅଛନ୍ତି। ସେ ପ୍ରଥମ ଦିଶାରେ କେତେ ଦୃର ଚାଲିଥିଲେ?
- (a) 1 km / 1 କି.ମି.
- (b) 2 km / 2 କି.ମି.
- (c) 3 km / 3 କି.ମି.
- (d) 4 km / 4 କି.ମି.

Ans: (c) 3 km / 3 କି.ମି.

23. A person walked 10 meters towards east, then turned left and walked 20 meters. After that, he turned left again and walked 10 meters. Finally, he turned right and walked 10 meters. In which direction is he from the starting point? ଗୋଟିଏ ବ୍ୟକ୍ତି 10 ମିଟର ପୂର୍ବକୁ ଚାଲିଥାଏ, ପରେ ସେ ବାମକୁ ମୋଡ଼ି 20 ମିଟର ଚାଲିଥାଏ। ତାପରେ, ସେ ପୁନରାୟ ବାମକୁ ମୋଡ଼ି 10 ମିଟର ଚାଲିଥାଏ। ଶେଷରେ ସେ ଦାହିଣକୁ ମୋଡ଼ି 10 ମିଟର ଚାଲିଥାଏ। ସେ କେଉଁ ଦିଶାରେ ତାଙ୍କର ଆରମ୍ଭ ସ୍ଥାନରୁ ଅଛନ୍ତି?

- (a) North / ଉତ୍ତର
- (b) South / ଦକ୍ଲିଣ
- (c) East / ପୂର୍ବ
- (d) West / ପଶ୍ଚିମ

Ans: (d) West / ซลิุศ

- 24. If a man faces south and turns 90 degrees clockwise, then turns 180 degrees anticlockwise, which direction is he facing now? ଯଦି ଗୋଟିଏ ବ୍ୟକ୍ତି ଦକ୍ଷିଣକୁ ମୁହଁ ଦେଉଛନ୍ତି ଏବଂ 90 ଡିଗ୍ରୀ ଘୂରିବା ପରେ, ପରେ 180 ଡିଗ୍ରୀ ବାମକୁ ଘୂରିବା ପରେ ସେ କେଉଁ ଦିଶାରେ ମୁହଁ ଦେଉଛନ୍ତି?
- (a) East / ପୂର୍ବ
- (b) West / ପଶ୍ଚିମ
- (c) North / ଉତ୍ତର
- (d) South / ଦକ୍କିଣ

Ans: (b) West / ฉลิุศ

- 25. From point A, a person walks 5 km north, then turns right and walks 3 km, then turns left and walks 2 km. What is the total distance from point A to his final position?
- ବିନ୍ତୁ A ରୁ, ଗୋଟିଏ ବ୍ୟକ୍ତି 5 କି.ମି. ଉତ୍ତରକୁ ଚାଲିଥାଏ, ପରେ ସେ ଦାହିଣକୁ ମୋଡ଼ି 3 କି.ମି. ଚାଲିଥାଏ, ପରେ ସେ ବାମକୁ ମୋଡ଼ି 2 କି.ମି. ଚାଲିଥାଏ। ବିନ୍ତୁ A ରୁ ତାଙ୍କର ଶେଷ ସ୍ଥାନ ପର୍ଯ୍ୟନ୍ତ ମୋଟ ଦୂରତା କେତେ?
- (a) 6 km / 6 କି.ମି.
- (b) 5 km / 5 କି.ମି.
- (c) 4 km / 4 କି.ମି.
- (d) 3 km / 3 କି.ମି.

Ans: (b) 5 km / 5 କิ.ମิ.

- 26. A boy travels 2 km east, then turns left and travels 1 km. Next, he turns left again and travels 2 km. How far is he from his starting point? ଗୋଟିଏ ଛୋକରା 2 କି.ମି. ପୂର୍ବକୁ ଯାଏ, ପରେ ସେ ବାମକୁ ମୋଡ଼ି 1 କି.ମି. ଯାଏ। ପରେ ସେ ପୁନରାୟ ବାମକୁ ମୋଡ଼ି 2 କି.ମି. ଯାଏ। ସେ ତାଙ୍କର ଆରମ୍ଭ ସ୍ଥାନରୁ କେତେ ଦୂରରେ ଅଛନ୍ତି?
- (a) 1 km / 1 କି.ମି.
- (b) 2 km / 2 କି.ମି.

247596

- (1) 695742
- 247569(2)
- 695742 (E)
- 247596 (4)
- 8) Find Mirror Image-

NATIONAL

- NATIONAL (1)
- (2) JANOITAN
- NATIONAL (E)
- (4) LAUOITAU
- 9) Find Mirror Image-

UTZFY6KH

- (1) HK9YJZIU
- HY6YEZTU (2)
- (3) HK9YFZTU
- UTZFY6KH (4)
- 10) Find Mirror Image

SUPERVISOR

- SUPERVISOR (1)
- (5) SUPERVISOR
- (3) RSOUPSERIV
- (4) SUPERVIOSR
- 11) Find Mirror Image-

DL9CG4728

- 8274GC9LD (1)
- D19CG4728 (S)
- DL9CG4728 (E)
- DL9CG4128 (4)
- 12) Find Mirror Image-

MAGAZINE

- ENIZAGAM (1)
- MAGAZINE (2)
- ENIZAGAM (E)
- MAGAZINE (4)

13)

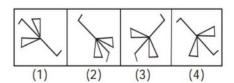
AN54WMG3

- YN24MWG3 (1)
- AN5 4WMG3 (2)
- (3) 3GMW45NA
- (4) EGMW45NA
- 14) Find Mirror Image

Question Figure:



Answer Figures:



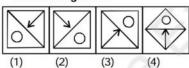
15) Find Mirror Image

BR4AQ16HI

- **BR4AQ16H1 (1)**
- **BR4AD19HJ(2)**
- **BR4AD16H1(E)**
- **BR4AQ19H1 (4)**
- 16) Find Mirror Image
- 25. Question Figure:



Answer Figures:

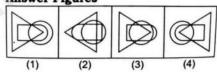


- 17) Find Mirror Image
 - 1. Problem Figure



Answer (4)

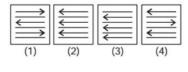
Answer Figures



18) Find Mirror Image

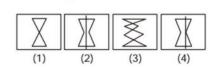
Question Figure : Answer Figures :





19) Find Mirror Image

Question Figure : Answer Figures :



20) Find Mirror Image

GEOGRAPHY

- GEOGRAPHY (1)
- (2) YHPARGOEG
- GEOGRAPHA (E)
- GEOGRYPHY (4)
- 21) Find Mirror Image

Introduction of English Grammar

Definition of Grammar: the grammar is a science which teaches to every person how a language is spoken and written correctly and effectively. **ବ୍ଯାକରଣ ର ପରିଭାଷା**: ବ୍ଯାକରଣ ଏମତି ଗୋଟେ ବିଜ୍ଞାନ ଅଟେ ଯିଏ ପ୍ରତି ବ୍ୟକ୍ତି କୁ କୌଣସି ଭାଷା କୁ ଶୁଦ୍ଧ ରୂପରେ ଲେଖିବା ତଥା ଭଲ ଭାବରେ ବୋଲିବା ଓ ଲେଖିବା ଶିଖାଇ ଥାଏ

What is language? ଭାଷା କଣ ଅଟେ ?

ମାନବ ହାରା ନିଜର ଭାବନା କୁ , ନିଜର ସୂଚନା କୁ, ତଥା କୌଣସି ସଚନା କିମ୍ବା ଜ୍ଞାନ କୁ ଭାଷା ମାଧ୍ୟମରେ ବ୍ୟକ୍ତ କରାଯାଇଥାଏ | ବିନା ଭାଷା ଦ୍ହାରା ବର୍ତ୍ତ ବା ଅକ୍ଷର ର କଳ୍ପନା କରିବା ଅସୟବ ଅଟେ Language is a medium of talking by which we express our emotions of heart, ideas of mind, feelings and thoughts to our friends and society. Alphabet (ବର୍ଣ୍ଣମାଳା)

କୌଣସି ମଧ୍ୟ ଭାଷା ବିନା ଅକ୍ଷର ରେ ସୟବ ନୁହଁ | ଅକ୍ଷର ସଙ୍କେତ ଧ୍ୱନି ପାଇଁ ପ୍ରଯୁକ୍ତ କରା ଯାଇଥାଏ | ଏମିତି ଭାଷାର ଅକ୍ଷର ର ସମହ କୁ Alphabet କୁହାଯାଇଥାଏ |

Letter (ଅକ୍ଷର) : ଇଂରାଜୀ ବର୍ତ୍ତମାଳରେ 26 ଅକ୍ଷର ଅଛି । ଏହି letters କୁ ଦୁଇ ଭାଗରେ ବିଭକ୍ତ କରାଯାଇଛି |

Vowels (ସୂର): ଇଂରାଜୀ ବର୍ତ୍ତମାଳା ରେ a, e, i, o, u ପାଅ ପ୍ରକାର ହୋଇଥାଏ । ଏମାନଙ୍କର ଉଚ୍ଚାରଣ ଅନ୍ୟ ବର୍ତ୍ତ ର ସହାୟତା ଦ୍ୱାରା କରାଯାଇ ପାରିବ ନାହିଁ

Consonant (ବ୍ୟଞ୍ଜନ) : ଉପରେ ଦିଆଯାଇଥିବା ପାଞ୍ଚ vowels କ୍ର ଛାଡି ବାକି ଅନ୍ୟ 21 ଅକ୍ଷର (b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, z) Consonant ହୋଇଥାଏ | ଏହି ଅକ୍ଷର ର ଉଚ୍ଚାରଣ vowels ର ସହାୟତ ବିନା ହୋଇ ପାରିବ ନହିଁ ଲେଖିବା ଦୃଷ୍ଟିକୋଣ ର ଏହି letters କୁ ଦୁଇ ଭାଗରେ ବିଭକ୍ତ କରାଯାଇଛି |

Capital Letters (ବଡ ଅକ୍ଷର):

ABCDEFGHIJKLMNOPQRSTUVWXY Z

2. Small Letters (ଛୋଟ ଅକ୍ଷର):

abcdefghjklmnopgrstuvwxyz Syllable (ଶନ୍ଦ ଖଣ୍ଡ):

ଏମିତି ଶବ୍ଦ ଅଥବା ସେଇ ଶବ୍ଦ ର ଏକ ଭାଗ ଯେଉଁଠି ଏକ ସ୍ଥର ଧ୍ୟନି ଥିବା ତାକୁ ଶବ୍ଦ ଖଣ୍ଡ (syllable)କୁହାଯାଏ । ଏକ Word (ଶବ୍ଦ) ରେ ଏକ ର ଅଧିକ ଶବ୍ଦ ଖଣ୍ଡ ରହିଥାନ୍ତି |

ଯେମିତି :

- 1. Do, ten, run, hub, Net ଆଦି ଏକ syllable ଶବ୍ଦ ଅଟେ
- 2. Don-key, Le-tter, use-ful ଆଦି ଦୁଇ syllable ଯୁକ୍ତ ଶବ୍ଦ ଅଟେ
- 3. Nai-tio-nal, beau-ti-ful, ଆଦି ଶବ୍ଦ ଖଣ୍ଡ ଯୁକ୍ତ ଶବ୍ଦ ଅଟେ

Word (ଶବ୍ଦ) : ଅକ୍ଷର ମାନଙ୍କର ଏମିତି ଏକ ସମୂହ (group) ଯାହାର କୌଣସି ନା କୌଣସି ଅର୍ଥ ହୋଇଥାଏ ତାକୁ ଶବ୍ଦ କୁହାଯାଏ | ଯେମିତି :

- 1. C+A+T = Cat କେଟ -ବିଲାଇ
- 2. A+P+P+L+E = Apple ଏପଲ ସେଓ
- 3. P+E+N = Pen = ପେନ କଲମ

Spelling (ବର୍ତନୀ) : କୌଣସି ଶବ୍ଦ word ର ଅକ୍ଷର ମାନଙ୍କର କ୍ରମ କ୍ ସ୍କେଲିଙ୍ଗ କୁହାଯାଏ |

Sentence (ବାକ୍ୟ): ଶବ୍ଦ ର ଏମିତି ସମ୍ବହ ଯିଏ ପୂର୍ଣ୍ଣ ଅର୍ଥ ପ୍ରଦାନ କରିଥାଏ ତାକୁ ବାକ୍ୟ କୁହାଯାଏ |

ଯେମିତି : He+is+a+ boy. = He is a boy.

Phrase (ବାକ୍ୟାଂଶ) :

ଏକ ରୁ ଅଧିକ ଶବ୍ଦ ମିଶି ବନୁଥିବା ସମୂହ ଯାହାର ଅର୍ଥ ନିର୍ଣ୍ଣିତ ହୋଇଥାଏ । ପରନ୍ତୁ ଭାବ ଅପୃଷ୍ଠି ରୁହେ ସେମାନେ Phrase କହାଯାଇଥାନ୍ତି ଏମାନଙ୍କ ସହ Finite Verb ହୋଇ ନଥାଏ ଯେମିତି: a young man, a black cow, in the river

Sentence- Types/Kinds of Sentences

ବାକ୍ୟ ହେଉଛି ସେହି ଶବ୍ଦର ଗୋଷୀ ଯାହା ଆମକୁ ସମ୍ପର୍ତ୍ତ ଅଥି ପ୍ରଦାନ କରେ, ଏହିପରି ଗୋଷ୍ପୀକୁ ବାକ୍ୟ କୁହାଯାଏ । ବାକ୍ୟ ତିଆରି କରିବା ପାଇଁ ବିଶେଷ୍ୟ, ଉଚ୍ଚାରଣ, ବିଶେଷଣ, ବିଶେଷଣ, ସମ୍ବନ୍ଧୀୟ ଧାରା, ସଂଯୋଗ ଏବଂ ଉଚ୍ଚାରଣ ବ୍ୟବହୃତ ହୁଏ |

ଯଥା - ପିଲାଟି ଇଂରାଜୀ ଶିଖିଛି ।

ବ୍ୟାଖ୍ୟା: ଉପରୋକ୍ତ ବାକ୍ୟଗୁଡ଼ିକର ସେଟ୍ ରେ ବାଳକ ହେଉଛି -ବିଶେଷ୍ୟ୍ ଶିଖିଛି - କ୍ରିୟା | ଏହି ସମୟ ଶଢଗୁଡ଼ିକ ଏକ ବାକ୍ୟ ତିଆରି କରନ୍ତି

What is a Sentence?

A group of words which makes complete sense is called a Sentence.

Definition of sentence - ବାକ୍ୟର ସଂଜ୍ଞା: "ଶବ୍ଦର ଗୋଷ୍ପୀ ଯାହା ସମ୍ପର୍ତ୍ତି ଅର୍ଥ ପଦାନ କରେ ବାକ୍ୟ କୃହାଯାଏ ।"

ଅନ୍ୟ ଶବ୍ଦରେ, ବାକ୍ୟ ହେଉଛି ସେହି ଶବ୍ଦର ଗୋଷ୍ପୀ ଯାହାର ଅର୍ଥ ସମ୍ପୂର୍ତ୍ତ ଭାବରେ ବୁଝାପଡ଼େ ଅର୍ଥାତ୍ ବାକ୍ୟ ହେଉଛି ସେହି ଗୋଷୀ ଯାହା ଦ୍ୱାରା ସମ୍ପର୍ଷ ଭାବନା ପ୍ରକାଶ ହୁଏ, ଏହାକୁ ବାକ୍ୟ କୁହାଯାଏ |

For example:

- The man of car there is. (Incorrect)
- The car of this man is there. (Correct)
- I a ball. (Incorrect)
- I have a ball. (Correct)

ଉପରୋକ୍ତ ବାକ୍ୟଗୁଡ଼ିକର ପ୍ରଥମରେ, ଶବ୍ଦର କ୍ରମ ସଠିକ୍ ନହିଁ ଯଥା ଏହି ବାକ୍ୟର କୌଣସି ଅର୍ଥ ପ୍ରକାଶ କରୁନାହିଁ । କିନ୍ତୁ ଦ୍ୱିତୀୟ ବାକ୍ୟରେ ଶବ୍ଦର କ୍ରମ ଠିକ୍ ରଖାଯାଇଛିଏବଂ ଏହା ସମ୍ପର୍ତ୍ତ ଅର୍ଥ ପଦାନ କରେ ।

More Examples -

Ram goes to market.

ରାମ ବଜାର ଯାଉଅଛି

She is a tall girl.

ସେ ଏକ ଡେଙ୍ଗା ଝିଅ ଅଟେ

I am a Teacher.

ମୁଁ ଜଣେ ଶିକ୍ଷକ ଅଟେ

Bhagat Singh was great.

ଭଗତ ସିଂ ମହାନ ଅଟନ୍ତି

In this post you will learn the following types/kinds of sentences:

- Assertive/Declarative sentence
- Interrogative sentence
- Imperative sentence
- Optative sentence
- Exclamatory sentence

Kinds/Types of Sentences

A sentence is a group of words which makes complete sense.

Types of Sentences (ବାକ୍ୟର ପ୍ରକାର)

English Grammar ରେ ବାକ୍ୟ ପାଞ୍ଚ ପ୍ରକାର ହୋଇଥାନ୍ତି

- Assertive/Declarative sentence (ବିଧିସ୍ତକ ବାକ୍ୟ)
- 2. Interrogative sentence (ପ୍ରଶ୍ରବାଚକ ବାକ୍ୟ)
- Imperative sentence
 (ଆଦେଶାତ୍ପକ/ଅନୁରୋଧ ସୂଚକ ବାକ୍ୟ)
- Optative sentence (ଇଚ୍ଛାତ୍ସକ ବାକ୍ୟ)
- 5. Exclamatory sentence (ଭାବସ୍ୱଚକ/ ବିସ୍ମୟସ୍ୱଚକ ବାକ୍ୟ)

Assertive Sentence in Hindi/Declarative Sentence (ବିଧୃସ୍ତକ ବାକ୍ୟ)

ସାଧାରଶତଃ, ଯେଉଁ ବାକ୍ୟ ଦ୍ବାରା କିଛି ବିବୃତ୍ତି ଦିଆଯାଇଥାଏ ବା ଯେଉଁଥିରେ ଏକ ସୂଚନା କିମ୍ବା ଘଟଣାର ଜ୍ଞାନ ଥାଏ ତାହାକୁ assertive sentence କୁହାଯାଇଥାଏ | Assertive Sentence ଶେଷରେ full stop (.) ଲଗାଯାଇଥାଏ

Meaning of Assertive – means to declare. Kinds of Assertive/Declarative Sentences

Assertive Sentences ଦୁଇ ପ୍ରକାର ହୋଇଥାଏ

- <u>Affirmative sentences</u> (ସ୍ୱୀକାରମ୍କ ବାକ୍ୟ)
- Negative sentences (ନକରାତ୍ପକ ବାକ୍ୟ)

Affirmative Sentences:

An affirmative Sentence always gives a positive statement. ଏକ ସକରାତ୍ପକ ବାକ୍ୟ ସର୍ବଦା ଏକ ସକରାତ୍ପକ ବିବୃତ୍ତି (ବିବୃତ୍ତି) ଦେଇଥାଏ |

Examples:

- 1. Mohan is a good boy. ମୋହନ ଜଣେ ଭଲ ବାଳକ ।
- 2. She was working in the company. ସେ କମ୍ପାନୀରେ କାମ କରୁଥିଲେ।
- 3. I am going to market. ମୁଁ ବଜାରକୁ ଯାଉଛି ।
- 4. She can do this work. ସେ ଏହି କାମ କରିପାରିବେ
- 5. ଆପଣ ଭାରତୀୟ ଅଟନ୍ତି।

You are an Indian.

Note: <u>Simple Sentences</u>/ Positive Sentences (ସାଧାରଣ ବାକ୍ୟ) affirmative Sentences ହୋଇଥାନ୍ତି |

Negative Sentences

A Negative Sentence always gives negative statement.

ଏକ ନକାରାତ୍ପକ ବାକ୍ୟ ସର୍ବଦା ଏକ ନକାରାତ୍ପକ ବିବୃତ୍ତି ଦିଏ |

Examples:

- 1. I am not a player.
- ମୁଁ ଜଣେ ଖେଳାଳି ନୁହେଁ ।
- 2. We have not any book.

ଆମର ଏକ ପୁଷ୍ତକ ନାହିଁ ।

- 3. There is not any milk in the glass. ଗ୍ଲାସରେ କ୍ଷୀର ନାହିଁ ।
- 4. He should not abuse anyone. ସେ କାହାକୁ ଦୁର୍ବ୍ୟବହାର କରିବା ଉଚିତ୍ ନୁହେଁ ।
- 5. We cannot smoke here. ଆମେ ଏଠାରେ ଧୂମପାନ କରିପାରିବୁ ନାହିଁ ।

Sentence ର Verb କୁ Negative ବନେଇବା

(A) Incomplete verbs (is, am, are, was, were) ରେ Verb ର ପରେ, not ଯୋଡି Negative ବନାଯାଇଥାଏ

Examples:

- 1. l am not ill. ମୁଁ ଅସୁସ୍ଥ ନୁହେଁ ।
- 2. She has not a car. ତାଙ୍କ ପାଖରେ କାର ନାହିଁ ।
- 3. They are not players. ସେମାନେ ଖେଳାଳି ନୁହଁନ୍ତି ।
- (B) ଯେଉଁ ବାକ୍ୟରେ ପୂର୍ଷ କ୍ରିୟା (complete verbs) ତଥା ସାହାୟକ କ୍ରିୟା (Helping Verb) ଆସିଥାଏ ସେଠାରେ ପ୍ରଥମ ସାହାୟକ କ୍ରିଏ ପରେ Not ଲଗାଇ Negative ବନାଯାଇଥାଏ Examples:

- 1. You do not work here. ଆପଣ ଏଠାରେ କାମ କରନ୍ତି ନାହିଁ ।
- 2. You should not abuse. ଆପଣ ଦୁର୍ବ୍ୟବହାର କରିବା ଉଚିତ୍ ନୁହେଁ।
- 3. Rohan does not cook the food. ରୋହନ ରୋଷେଇ କରନ୍ତି ନାହିଁ ।

Interrogative sentence (ପ୍ରଶ୍ୱସ୍ତକ ବାକ୍ୟ)

ଯେତେବେଳେ କୌଣସି ବ୍ୟକ୍ତି ପାଖରୁ କିଛି ଜ୍ଞାନ ପ୍ରାପ୍ତ କରିବା ହେଲେ ପ୍ରଶ୍ନ ବାଚକ ବାକ୍ୟ (<u>interrogative sentence</u>) ପ୍ରୟୋଗ କରାଯାଇଥାଏ | ପ୍ରଶ୍ନବାଚକ ବାକ୍ୟ ଶେଷରେ question mark (?) ର ପ୍ରୟୋଗ କରାଯାଇ ଥାଏ

An Interrogative sentence asks a question.

Examples:

Is he a player?
 ସେ ଜଣେ ଖେଳାଳି କି?

2. Are you happy today? ଆପଣ ଆଜି ଖୁସି କି?

3. What do you do? ଆପଣ କ'ଣ କରନ୍ତି?

4. Where are you going now? ଆପଣ କୁଆଡେ ଯାଉଛନ୍ତି ?

5. How do you who play the piano? ଆପଣ ବର୍ତ୍ତମାନ କୁଆଡେ ଯାଉଛନ୍ତି?

Note: Interrogative sentence ଦୁଇ ପ୍ରକାର ହୋଇଥାନ୍ତି

Yes-No Type Questions

ସେଇ ବାକ୍ୟ ଯାହା କ୍ରିୟା ତଥା ସାହାୟକ କ୍ରିୟରୁ ଆରୟ ହୋଇଥାଏ Examples:

Is she a good singer?
 ସେ ଜଣେ ଭଲ ଗାୟକ କି?

2. Does he play cricket? ସେ କ୍ରିକେଟ୍ ଖେଳନ୍ତି କି?

Wh-word Type Questions

ସେଇ ବାକ୍ୟ ଯିଏ ପ୍ରଶ୍ନବାଚକ (wh-word) ଶବ୍ଦର ଆରୟ ହୋଇଥାଏ

1. What does she want? ସେ କ'ଶ ଚାହାଁନ୍ତି?

2. When will you go to market tomorrow? ଆସନ୍ତାକାଲି ଆପଣ କେବେ ବଜାରକୁ ଯିବେ?

3. Who was not working? କିଏ କାମ କରୁନଥିଲା?

4. Where does the girl go to study? ଝିଅଟି କେଉଁଠାରେ ଅଧ୍ୟୟନ କରିବାକୁ ଯାଏ?

Imperative Sentence – (ଅନୁରୋଧ ସୂଚକ)

ଅନୁରୋଧ ସୂଚକ ବାକ୍ୟ (<u>Imperative Sentence</u>) ରେ ଅଙ୍ଗୀୟା, ନିବେଦନ, ଆଦେଶ ତଥା ପରାମର୍ଶ କୁ ବୁଝାଇ ଥାଏ | ବାକ୍ୟ ଶେଷରେ

(.) ଲଗାଯାଇଥାଏ

Examples:

1. Get out. ବାହାରକୁ ଯାଆନ୍ତୁ।

2. Please sit here. ଦୟାକରି ଏଠାରେ ବସନ୍ତୁ।

3. Never tell a lie. କେବେ ବି ମିଛ କୁହନ୍ତୁ ନାହିଁ।

4. Do not beat the child. ପିଲାଟିକୁ ପିଟ ନାହିଁ ।

5. Always speak the truth. ସର୍ବଦା ସତ କୁହନ୍ତୁ।

Note: Imperative Sentences ରେ କର୍ତ୍ତା (subject) ଲୁଚି ରହିଥାଏ

Examples:

1. Come here. ଏଠାକୁ ଆସ

You, come here. – ତୁମେ, ଏଠାକୁ ଆସ ।

2. Open the book now. ବର୍ତ୍ତମାନ ପୁଞ୍ଚକ ଖୋଲନ୍ତୁ You, open the book now. – ଆପଣ ବର୍ତ୍ତମାନ ପୁଞ୍ଚକ ଖୋଲନ୍ତୁ।

Optative Sentence (ଇଚ୍ଛାତ୍ସକ ବାକ୍ୟ)

ଇଚ୍ଛା କିମ୍ବା ଆଶୀର୍ବାଦ ପ୍ରକାଶ କରୁଥିବା ବାକ୍ୟଗୁଡ଼ିକୁ ଅପ୍ଟିଭ୍ ବାକ୍ୟ (Optative Sentence) କୁହାଯାଏ |

Examples:

1. May God bless you! ଭଗବାନ ଆପଶଙ୍କୁ ଆଶୀର୍ବାଦ କରନ୍ତୁ!

2. May you live long! ଭଗବାନ ଆପଣଙ୍କୁ ଦୀର୍ଘାୟୁ କରନ୍ତୁ!

3. May God save our country! ଭଗବାନ ଆମ ଦେଶକୁ ସୁରକ୍ଷା ଦିଅନ୍ତୁ!

4. May God succeed you! ଭଗବାନ ଆପଣଙ୍କୁ ସଫଳ କରନ୍ତୁ ।

Exclamatory Sentence – ଭାବସୂଚକ /ବିସ୍ମୟସୂଚକ ବାକ୍ୟ ଯେଉଁ ବାକ୍ୟଗୁଡ଼ିକରେ ଆଣ୍ଟର୍ଯ୍ୟ, ଦୁଃଖ, ସୁଖ ଏବଂ ଘୃଣା ଇତ୍ୟାଦିର ଅଭିବ୍ୟକ୍ତି ଭାବ ର ପ୍ରକାଶ ହୋଇଥାଏ ତାକୁ ବିସ୍ମୟସୂଚକ ବାକ୍ୟ କୁହାଯାଇଥାଏ Examples:

 What a beautiful scene it is! କେତେ ସୁନ୍ଦର ଦୃଶ୍ୟ!

2. How beautiful is the rain! ବର୍ଷା କେତେ ସ୍ୱନ୍ଦର!

3. How hot the day is! ଦିନଟି କେତେ ଗରମ!

4. What a shame! କେତେ ଲଜାଜନକ! Note: ଏକୁକ୍ଲାମେଟୋରୀ ବାକ୍ୟ ଶେଷରେ (!) ବିସ୍ମୟକର ଚିହ୍ନ ରଖନ୍ତ

Parts of a Sentence - Subject and Predicate

ବାକ୍ୟ ବହୁତ ସାରା ଶବ୍ଦ କୁ ନେଇ ତିଆରି ହୋଇଥାଏ , ଯେଉଁଥିରେ ପ୍ରମୁଖ ଶବ୍ଦ କର୍ତ୍ତା ତଥା କ୍ରିୟା ଅଟେ । ଏହାର ଆଧାରରେ ବାକ୍ୟକୁ ଦୁଇ ଭାଗରେ ବଣ୍ଟା ଯାଇଥାଏ ।

ପ୍ରତ୍ୟକ Sentence ଦୁଇ ଭାଗ ରେ ବିଭକ୍ତ ହୋଇଥାନ୍ତି

- 1. Subject (କର୍ତ୍ତା)
- 2. Predicate (ବିଧେୟ)

Subject (କର୍ତ୍ତା)

What is a subject?

Subject ବାକ୍ୟର ସେଇ ଭାଗ ଅଟେ ଯାହା ବିଷୟରେ କିଛି କୁହାଯାଇଥିବ (Subject is the part of the sentence about which something is said.)

ଯେମିତି:

- Shyam sold his bike.
 (ଶ୍ୟାମ ନିଜର ବାଇକ ବିକ୍ରୟ କଲା)
- 2. <u>You</u> have done your work. (ଆପଣ ଆପଣଙ୍କର କାର୍ଯ୍ୟ କରିଛନ୍ତି।)
- 3. <u>He</u> has a car. (ତାଙ୍କର ଏକ କାର ଅଛି।)
- 4. <u>It</u> is raining today. (ଆଜି ବର୍ଷା ହେଉଛି।)

ଉପଯୁକ୍ତ ବାକ୍ୟଗୁଡ଼ିକରେ Shyam, You, He ତଥା It Subject ଅଟେ ଅଟେ ତଥା ବାକି ଅଲଗା ବଞ୍ଚିଥିବା ପାର୍ଟ କୁ Predicate କୁହାଯାଏ |

Predicate (ବିଧେୟ)

What is predicate?

Subject ର ବିଷୟରେ ଯଦି କିଛି କୁହାଯାଏ ସେ Predicate ହୋଇଥାଏ | ଅର୍ଥାତ Subject କୁ ଛାଡି ବାକ୍ୟର ଅନ୍ୟ ପାର୍ଟ predicate ହୋଇଥାଏ

Whatever is said about the subject is called Predicate. That is, except the subject, the rest of the sentence is called the predicate.

Examples:

- 1. Rajesh <u>is very happy.</u> ରାଜେଶ ବହୁତ ଖୁସି ।
- 2. They <u>are normal now</u>. ସେ ବର୍ତ୍ତମାନ ସାମାନ୍ଥ ଅଟେ
- 3. I can solve it.
- ମୁଁ ଏହାର ସମାଧାନ କରିପାରିବି ।
- 4. The girls of the college <u>are absent</u>. କଲେଜର ଝିଅମାନେ ଅନୁପସ୍ଥିତ ଅଛନ୍ତି ।

Note: ଉପରୋକ୍ତ ବାକ୍ୟରେ underlined ଭାଗ ବିଧେୟ ଅଟେ

NOUN (ବିଶେଷ୍ୟ)

'କୌଣସି ବ୍ୟକ୍ତି, ବସ୍ତୁ, ସ୍ଥାନ, ଗୁଣ, କାର୍ଯ୍ୟ ଅବ। ଅବସ୍ଥା ର ନାମ କୂ Noun (ବିଶେଷ୍ୟ) କୁହାଯାଇ ଥାଏ।'

A noun is a word used as a name of a person, place or thing.

Noun ପାଞ୍ଚ ପ୍ରକାର ର ହୋଇଥାନ୍ତି:

- 1 Proper Noun (ବ୍ୟକ୍ତିବାଚକ)
- 2 Common Noun (ଜାତିବାଚକ)
- 3 Collective Noun (ସମୂହବାଚକ)
- 4 Material Noun (ବୟବାଚକ)
- 5 Abstract Noun (ଭାବବାଚକ)

(1) PROPER NOUN

ବ୍ୟକ୍ତିବାଚକ କହିଲେ କେବଳ ଲୋକର ନାମ ଏହା ନୁହେଁ, ଏହା କୌଣସି ଗ୍ରାମ, ସହର, ଦେଶ, ନଦୀ, ହ୍ରଦ, ପର୍ବତ ଇତ୍ୟାଦିର ନାମକୁ ବୁଝାଏ ଯେମିତି: Ram, Delhi, Gita etc.

- (a) Ram is my friend.
- (b) I live in Delhi.

(2) COMMON NOUN

ଯେଉଁ ବିଶେଷ୍ୟ (NOUN) ପଦ ଗୋଟିକୁ ନ ବୁଝାଇ ଗୋଟିଏ ଜାତି ବା ଗୋଷ୍ପୀକୁ ବୁଝାଏ, ତାକୁ ଜାତି ବାଚକ (COMMON NOUN) ବିଶେଷ୍ୟ କହନ୍ତି ।

ଯେମିତି- King, boy, girl, city etc.

- (a) According to the boy, the nearest town is very
- (b) The boys are going to the nearest village.

(3) COLLECTIVE NOUN

ଯେଉଁ Noun (ବିଶେଷ୍ୟ) ରୁ ସମୂହ ବା ଗୋଷ୍ପୀ ର ଧାରଣା ହେଲେ, ତାକୁ Collective Noun (ସମୂହବାଚକ ବିଶେଷ୍ୟ) କୁହାଯାଇଥାଏ ଯେମିତି: Team, Committee, Army etc.

ସାମାନ୍ୟତଃ: Collective Noun ର ପ୍ରୟୋଗ Singular ରେ ହୋଇଥାଏ। ଏମାନଙ୍କର ପ୍ରୟୋଗ Plural ରେ ମଧ୍ୟ କରାଯାଇ ଥାଏ ଯେତେବେଳେ ମତଭେଦ ଦର୍ଶାଇଥାଏ ଅବା ପ୍ରତ୍ୟକ ସଦସ୍ୟର ବିଷୟରେ କିଛି କିଛି କୁହାଯିବ

- (a) The flock of geese $\underbrace{\text{spends}}_{\text{s.v.}}$ most of its time in the pasture.
- (c) The committee <u>meets</u> every week.
- (d) The team <u>are</u> divided over the issue of captainship. (ମତଭେଦ)
- (e) The audience <u>have</u> taken <u>their</u> seats. (ପ୍ରତ୍ୟକ

ବ୍ୟକ୍ତି)

(4) MATERIAL NOUN (ବୟୁ ବାଚକ ବିଶେଷ୍ୟ)

ଯେଉଁ ବିଶେଷ୍ୟ (NOUN) ପଦ କୌଣସି ବସ୍ତୁ ବା ପଦାର୍ଥର ନାମକୁ ବୁଝାଏ, ତାକୁ ବସ୍ତୁବାଚକ ବିଶେଷ୍ୟ MATERIAL NOUN କହନ୍ତି | ଯେମିତି: Silver, iron, wood etc.

- (a) The necklace is made of gold.
- (b) She has purchased a tea set of silver.
- (c) He got his furniture made of teak wood.

Material Nouns, *Countable* ହୋଇନଥାନ୍ତି ଅର୍ଥାତ ଏହାକୁ ଗଣା ଯାଇ ପାରିବ ନାହିଁ ଏହାକୁ ମାପି ପାରିବା କିମ୍ବା ଓକନ କରାଯାଇ ପାରିବ | ଏମାନଙ୍କ ସହ ସାମାନ୍ୟତଃ: *Singular verb* ର ପ୍ରୟୋଗ କରାଯାଇ ଥାଏ ଓ ଏମାନଙ୍କର ପୂର୍ବରୁ *Article* ର ପ୍ରୟୋଗ କରାଯାଇ ନଥାଏ

(5) ABSTRACT NOUN

ର୍ଯେଉଁ ବିଶେଷ୍ୟ ପଦ କୌଣସି ନିର୍ଦ୍ଦିଷ୍ଟ ଗୁଣ ବ ଅବୟାର ନାମକୁ ବୁଝାଏ, ତାକୁ ଗୁଣବାଚକ ବିଶେଷ୍ୟ (Abstract Noun)କୁହାଯାଏ ଏମିତି ଗୁଣ, ଭାବ, କ୍ରିୟା ଓ ଅବୟା କୁ ବ୍ୟକ୍ତ କରା ଯାଇ ପାରିବ କିନ୍ତୁ ଏହାକୁ ଛୁଇଁ ପାରିବା ନହିଁ ବରଂ ଦେଖିପାରିବା ଏବଂ ଅନୁଭବ କରି ପାରିବା ଯେମିତି: Honesty, bravery (quality), hatred, laughter (action), poverty, youth (state).

Abstract Noun ର ପ୍ରୟୋଗ ସାମାନ୍ୟତଃ: Singular ରେ କରାଯାଇ ଥାଏ।

ଯେମିତି: (a) People respect his sincerity.

(b) Honesty is the best policy.

Noun କୁ (A) Countable ଏବଂ (B) Uncountable ରେ ବଣ୍ଟା ଯାଇ ପାରିବ

(A) Countable Nouns

Countable Noun ସେହି Noun ହୋଇଥାଏ, ଯାହାର ଗଶନା କରା ଯାଇ ପାରିବ

ଯେମିତି: (a) We bought six tables.

- (b) I have a few friends.
- (c) She saw many movies last month.

(B) NON-COUNTABLE NOUNS

Ùncountable Noun ସେହି Noun ହୋଇଥାଏ, ଯାହାକୁ ଗଣା ଯାଇ ପାରିବ ନାହିଁ

ଯେମିତି: (a) J. Priestly discovered oxygen.

(b) They decided to sell the furniture.

(c) Much money was wasted on the show.

	Countable Noun	Uncountable Noun
Eg:-	Stars, Seconds, Rupees etc.	Money, time,

		knowledge etc.
Verb-	Singular with Plural with Singular Plural Noun	Soun
Adjective-	M any, few, a number of, the number of.	M uch, little, quantity of
Article -	A/An/ the can be used.	only 'the' can be used

Important Rules

RULE 1

କିଛି Nouns ର ପ୍ରୟୋଗ ସବୁବେଳେ Plural form ରେ ହୋଇଥାଏ । ଏହି Nouns ର ଶେଷରେ ଲାଗିଥିବା **s** କୁ ହଟାଇ, ତାକୁ Singular ବନାଯାଇ ପାରିବ ନାହି ଏମାନେ ଦେଖିବା ପାଇଁ ମଧ୍ୟ Plural ଲାଗିଥାନ୍ତି, ଓ ଏହା ପ୍ରୟୋଗ ମଧ୍ୟ Plural ଭଳି ହୋଇଥାଏ । ଏମିତି Nouns ନିମ୍ନ ମଧ୍ୟର:

Scissors, tongs (ଚିମଟା), pliers, pincers, bellows (ଘଞ୍ଜି), trousers, pants, pajamas, shorts, gallows (ଫାଶୀର ଫନ୍ଦା), fangs (ଡଙ୍କ), spectacles, goggles, binoculars (ଦୁର୍ବିନ), sunglasses, Alms (ଦାନ), amends (ସଂଶୋଧନ), archives (ଐତିହାସିକ ଲେଖା), arrears, auspices, congratulations, embers (ଚିଂଗରୀ), fireworks, lodgings, outskirts, particulars, proceeds, regards, riches, remains, savings, shambles, surroundings, tidings, troops, tactics, thanks, valuables, wages, belongings, braces, etc. ଯେମିତି: (a) Where are my pants?

(b) Where are the tongs?

- (c) The proceeds were deposited in the bank.
- (d) All his assets were seized.
- (e) Alms were given to the beggars.
- (f) The embers of the fire were still burnings.

ନୋଟ: 'Wages' ର ପ୍ରୟୋଗ singular ଓ plural ଉଭୟ forms ରେ କରାଯାଇ ପାରିବ | ନିମ୍ନଲିଖିତ ବାକ୍ୟ ମାନଙ୍କରେ କୁ ଦେଖନ୍ତୁ-Wages (ମଚ୍ଚଦୂରୀ- Plural ଫର୍ମ ରେ – Wages <u>are</u> paid in cash)

Wages (ପରିଶାମ- Singular ଫର୍ମ ରେ – Wages of hard work <u>is</u>sweet.)

RULE 2

କିଛି Nouns ଦେଖିବାରେ Plural ଲାଗିଥାନ୍ତି କିନ୍ତୁ ଅର୍ଥ ରେ Singular ହୋଇଥାନ୍ତି । ଏମାନଙ୍କର ପ୍ରୟୋଗ ସବୁବେଳେ Singular ରେ ହିଁ ହୋଇଥାଏ । ଯେମିତି: News, Innings, Politics, Summons, Physics, Economics, Ethics, Mathematics, Mumps,

Measles, Rickets, Shingles, Billiards, Athletics etc. ଯେମିତି: (a) No news is good news.

- (b) Politics is a dirty game.
- (c) Economics is an interesting subject.
- (d) Ethics demands honesty.

RULE 3

କିଛି Nouns ଦେଖିବାରେ Singular ଲାଗିଥାନ୍ତି, କିନ୍ତୁ ଏମାନଙ୍କର ପ୍ରୟୋଗ ସବୁବେଳେ Plural ରେ ହୋଇଥାଏ । ଯେମିଡି: cattle, cavalry, infantry, poultry, peasantry, children, gentry, police, people, etc. ଏମାନଙ୍କ ସହ କେବେ ମଧ୍ୟ 's' ଲଗା ଯାଇପାରିବ ନାହି, ଯେମିଡି: cattles, childrens ଲେଖିବା ଭୁଲ ହେବ

ଯେମିତି: (a) Cattle are grazing in the field.

- (b) Our infantry have marched forward.
- (c) Police have arrested the thieves.

ନୋଟ: 'People' ର ଅର୍ଥ ର ଲୋକ 'Peoples' ର ଅର୍ଥ ଅଟେ 'ବିଭିନ୍ନ ମୂଳବଂଶ (different races) ର ଲୋକ

RULE 4

କିଛି Nouns ର ପ୍ରୟୋଗ, କେବଳ Singular form ରେ ହିଁ କରାଯାଇ ଥାଏ। ଏମାନେ Uncountable Nouns ଅଟନ୍ତି। ଏମାନଙ୍କ ସହ Article A/An ର ପ୍ରୟୋଗ ମଧ୍ୟ କରାଯାଇ ନଥାଏ ଯେମିତି:

Scenery, Poetry, Furniture, Advice, Information, Hair, Business, Mischief, Bread, Stationery, Crockery, Luggage, Baggage, Postage, Knowledge, Wastage, Jewellery, Breakage, Equipment, Work (Works ର ଅର୍ଥ ଅଟେ ସାହିତ୍ୟ ଲେଖ), Evidence, Word ଯେମିତି: (a) The scenery of Kashmir is very charming.

- (b) I have no information about her residence.
- (c) The mischief committed by him is unpardonable.
- (d) His hair is black.
- (e) I have bought some equipment that I needed for the project.
- (i) ଏହି Nouns ର ବହୁବଚନ ବନାଯାଇ ପାରିବ ନାହିଁ ଯେମିତି: Sceneries, informations, furnitures, hairs ଇତ୍ୟାଦି ଲେଖିବା ଭୁଲ ହେବ
- (ii) ଯଦି ଉକ୍ତ Noun ର Singular ଅବା Plural ଉଭୟ forms ରେ ଆବଶ୍ୟକତା ହେଲେ ତାହେଲେ, ଏମାନଙ୍କ ସହ କିଛି ଶବ୍ଦ ଯୋଡ଼ା ଯାଇଥାଏ

ତଳେ ଦିଆଯାଇଥିବା ଉଦାହରଣ ଦେଖନ୍ତୁ:

- (a) He gave me a piece of information.
- (b) All pieces of information given by her were reliable.
- (c) Many kinds of furniture are available in that shop.
- (d) I want a few articles of jewellery.

- (e) He ate two slices of bread.
- (f) Please show me some items of office stationery.
- (g) The Police have found a strand of hair in the car.

ନୋଟ: Money ର plural form 'Monies' ହେଇ ପାରିବ ଯାହାର ଅର୍ଥ 'sums of money'.

ଯେମିତି: Monies have been collected and handed to the women's welfare society.

RULE 5

କିଛି Nouns, Plural ଓ Singular ଉଭୟ ରେ ଏକା ହିଁ ରୂପ ରେ ରହିଥାନ୍ତି ଯେମିତି: deer,sheep, series, species, fish, crew, team, jury, aircraft, counsel etc. ଯେମିତି: (a) Our team is the best.

- (b) Our team are trying their new uniform.
- (c) There are two fish in the pond.
- (d) There are many fishes in the aquarium.('Fishes' ର ଅର୍ଥ ବିଭିନ୍ନ ପ୍ରକାତିର ର fish)

RULE 6

Hyphenated noun ର ପ୍ରୟୋଗ କେବେ ମଧ୍ୟ plural form ରେ ହୋଇ ନଥାଏ।

ଯେମିତି: (a) He gave me two hundred-rupees notes. (rupees କୁ rupee ରେ ପରିବର୍ତ୍ତିତ କରନ୍ତୁ)

(b) He stays in five- stars hotels. (stars କୁ star ରେ ପରିବର୍ତ୍ତିତ କରନ୍ତୁ)

RULE 7

କିଛି nouns ର ପ୍ରୟୋଗ ଲୋକ ମାନେ ଏମତି କହିଥାନ୍ତି କିନ୍ତୁ ବାୟବରେ ଏହାର ପ୍ରୟୋଗ କରିବା ବିଲକୁଲ ଭୁଲ ହୋଇଥାଏ ।

	2 2
WRONG	RIGHT
Cousin Brother	- Cousin
Cousin Sister	- Cousin
Pickpocketer	- Pickpocket
Good Name	- Name
Big Blunder	- Blunder (Blunder ର ଅର୍ଥ ବଡ ଭୁଲ
ସେଥିପାଇଁ ଏଠାରେ	big blunder ଲେଖିବା ଭୁଲ ହେବ)
Small Blunder	- Blunder
Bad dream	- Nightmare

RULE 8

କିଛି Nouns ଯିଏ ଅର୍ଥ ରେ ତାହେଲେ Plural ହୋଇଥାନ୍ତି କିନ୍ତୁ ଯଦି ଏମାନଙ୍କର ପୂର୍ବରେ କୌଣସି ନିଶ୍ଚିତ ସଂଖ୍ୟାତ୍ପକ (Definite numeral adjective) ର ପ୍ରୟୋଗ କରାଯାଏ ତାହେଲେ ଏହି Noun କୁ Pluralise କରାଯାଇ ପାରିବ ନାହି ଯେମିତି : Pair, score, gross, stone, hundred, dozen, thousand, million, billion, etc.

ଯେମିତି: (a) I have two pairs of shoes.

- (b) I have two hundred rupees only.
- (c) She purchased three dozen pencils.
- (d) He has already donated five thousand rupees.

କିନ୍ତୁ ଯଦି ଏମାନଙ୍କ ସହ Indefinite countable ର ପ୍ରୟୋଗ ହେଲେ ତାହେଲେ ଏହାକୁ Pluralise କରାଯାଇ ଥାଏ I ଯେମିତି: dozens of women, hundreds of people, millions of dollars, scores of shops, many pairs of shoes etc.

ଯେମିତି: (a) Hundreds of people came to see the fair.

(b) He donated millions of rupees.

RULE 9

ଯଦି କୌଣସି Noun ର ପରେ Preposition ର ପ୍ରୟୋଗ ହେଲେ ଏବଂ ପୁଣି ସେହି 'Noun' repeat ହେଲେ ତାହେଲେ ସେହି 'Noun' Singular form ରେ ହେବା ଦରକାର । ଯେମିତି:

ଯେମିତି: (a) Town after town was devastated.

- (b) Row upon row of marble looks beautiful.
- (c) He enquired from door to door.
- (d) Ship after ship is arriving.

ଏହି ପ୍ରକାର ବାକ୍ୟରେTowns after towns, Rows upon rows, doors to doors ଅବା ships after ships ଲେଖିବା ଭୂଲ ହେବ

RULE 10

Common Gender Nouns ଯେମିତି: Teacher, student, child, clerk, advocate, worker, writer, leader, musician etc. ଏମିତି nouns ଯାହାର ପ୍ରୟୋଗ male ଓ female ଉଭୟ ପାଇଁ କରାଯାଇ ଥାଏ। ଏହାକୁ Dual Gender ମଧ୍ୟ କୁହାଯାଇ ଥାଏ। ଯେତେବେଳେ ଏମିତି ପ୍ରକାର ର Noun ର ପ୍ରୟୋଗ Singular ରେ କରାଯାଇ ଥାଏ। ଯେମିତି:

- (1) Every leader should perform his duty.
- (2) A teacher should perform his duty sincerely.

WORDS DENOTING GROUP

- A band of musicians.
- 2 A board of directors, etc.
- 3 A bevy of girls, women, officers etc.
- 19 A curriculum of studies.
- 20 A flight of steps, stairs.
- 21 A fleet of ships or motorcars.
- 22 A flock of geese, sheep and birds.

- 4 A bunch of grapes, keys, etc.
- 5 A bundle of sticks and hay.
- 6 A caravan of Merchants, pilgrims, travellers.
- 7 A chain/range of mountains or hills.
- 8 A choir of singers.
- 9 A class of students.
- 10 A retinue of servants/ attendants.
- 11 A clump/grove of trees.
- 12 A code of laws.
- 13 A cluster / constellation/ galaxy of stars.
- 14 A company/regime nt/army of soldiers.
- 15 A convoy of ships, cars etc. moving under an escort.
- 16 A course or series of lectures.
- 17 A crew of sailors.
- 18 A crowd/mob of people.

- 23 A gang of robbers, labourers.
- 24 A garland/bunch/b ouquet of flowers.
- 25 A heap of ruins, sand, stones.
- 26 A herd of cattle.
- 27 A litter of puppies.
- 28 A pack of hounds, cards.
- 29 A pair of shoes, scissors, compasses, trousers.
- 30 A series of events.
- 31 A sheaf of corn, arrows.
- 32 A swarm of ants, bees or flies.
- 33 A train of carriages, followers etc.
- 34 A troop of horses (cavalry) scouts; etc.
- 35 A volley of shots, bullets
- 36 A forum of people (discussing issues)
- 37 A congregation of people (discussing religious issues)

NOUN-GENDER

Gender କୁ ଚାରି ଭାଗରେ ବିଭାଜିତ କରାଯାଇଥାଏ

(1) Masculine Gender (ପୁଲିଙ୍ଗ): ଏମିଡି Noun ଯିଏ male sex କୁ ବ୍ୟକ୍ତ କରିଥାଏ, ଏମାନେ Masculine Gender କୁହାଯାଇଥାନ୍ତି ଯେମିତି: Tiger, Power, Violence, Father, Sun, Summer, Time, Thunder etc.

(2) Feminine Gender (ସ୍ତ୍ରୀଲିଙ୍ଗ): ଏମିଡି Noun ଯିଏ Female sex କୁ ବ୍ୟକ୍ତ କରିଥାଏ, Feminine Gender କୁହାଯାଇଥାନ୍ତି

ଯେମିଡି: Tigress, Woman, Lioness, Mother, Sister, Peace, Nature, Earth, Goddess etc.

- (3) Common Gender (ଉଭୟ ଲିଙ୍ଗ) ଏମିତି Noun ଯିଏ ସ୍ତ୍ରୀ ଓ ପୁରୁଷ ଉଭୟ ପାଇଁ ପ୍ରଯୁକ୍ତ ହୋଇଥାନ୍ତି, ସେମାନେ Common Gender କୁହାଯାଇଥାଏ ଯେମିତି: Child, Baby, Teacher, Servant, Student,
- (4) Neuter Gender (ନପୁସଙ୍ଗ ଲିଙ୍ଗ): ଏମିଡି Noun ଯିଏ ନିର୍ଚ୍ଚୀବ ବସ୍ତୁ ଗୁଡ଼ିକୁ ବ୍ୟକ୍ତ କରିଥାନ୍ତି ଯିଏ Male କି female ହୋଇନଥିବେ ତାକୁ Neuter Gender କୁହାଯାଇଥାଏ | ଯେମିଡି: Copy, Book, Room, Paper, T.V., Box, etc.

Cousin, Infant, Thief, Neighbour etc.

RULE 1

କିଛି cases ରେ Masculine Noun ର ପରେ 'ess' ଲଗାଇ Feminine Noun ବନା ଯାଇ ପାରିବ ଯେମିତି:

Feminine
Authoress
Hostess
Jewess
Mayoress
Poetess
Tutoress
Shepherdess
Giantess
Heiress
Lioness
Priestess
Tailoress

RULE 2

କିଛି cases ରେ Masculine Noun ର ଶେଷରେ vowel ଓ ତା ପୂର୍ବରୁ ଆସୁଥିବା consonant କୁ ହଟାଇ 'ess' ଯୋଡି ମଧ୍ୟ Feminine Noun ତିଆରି କରାଯାଇ ପାରିବ ଯେମିତି:

Masculine	Feminine
Actor	Actress
Benefactor(ଉପକାରୀ)	Benefactress
Hunter (ଶିକାରୀ)	Huntress
Prince (ରାଜକୁମାର)	Princess
Waiter	Waitress
Ambassador	Ambassadress
Director	Directress
Negro	Negress
Tiger	Tigress

RULE 3

କିଛି cases ରେ Masculine Noun ର ଶବ୍ଦ ଗୁଡିକ ରେ କିଛି change କରାଯାଇ ଥାଏ ଓ ଶେଷରେ 'ess' ଲଗାଇଲେ ମଧ୍ୟ Feminine Noun ବନି ଯାଇଥାଏ

Masculine	Feminine
Emperor(ରାଜା)	Empress
Governor	Governess
Duke	Duchess
God	Goddess
Master	Mistress
Sorcerer (ଯଦୁଗର)	Sorceress

RULE 4

କିଛି Cases ରେ compound Musculine Noun ର first ଅଥବା second ଶବ୍ଦରେ କିଛି ପରିବର୍ତ୍ତନ କରନ୍ତୁ

Masculine	Feminine
Man-servant	Maid - servant
Washerman	Washerwoman
Buck-rabbit	Doe-Rabbit
Brother-in law	Sister-in-law
He-bear	She-bear
Bull-calf	Cow-calf
Jack-ass	Jenny-ass
Headmaster	Headmistress
Milkman	Milkmaid
Postmaster	Postmistress
Peacock	Peahen
Landlord	Landlady
Father-in-law	Mother-in-law
Step-Father	Step-Mother
He-goat	She-goat
Cock-sparrow	Hen-sparrow
Dog-wolf	Bitch-wolf
Stepbrother	Stepsister
Grandson	Granddaughter

RULE 5

Foreign words ଓ ଅନ୍ୟ ବିବିଧ ଶବ୍ଦ ଗୁଡିକ Masculine ଓ

Computer Literacy

1. Fundamental Computer Skills

- Operating System Basics: Understanding how to use Windows, macOS, or Linux.
- File Management: Creating, renaming, saving, and organizing files and folders.
- Basic Typing: Proficiency in typing using QWERTY keyboards or regional language typing tools.
- **Shortcut Keys**: Knowledge of common keyboard shortcuts (e.g., Ctrl + C for copy, Ctrl + S for save).

2. Using Software Applications

- Word Processors: Using Microsoft Word, Google Docs, or LibreOffice for lesson plans and assignments.
- **Spreadsheets**: Basic functions of Microsoft Excel or Google Sheets for maintaining student records.
- Presentations: Creating engaging slideshows with PowerPoint or Google Slides.
- PDF Tools: Using Adobe Acrobat or online tools to create and edit PDF documents.

3. Internet Skills

- Web Browsing: Using browsers (e.g., Chrome, Edge) to find teaching resources.
- Search Engines: Effective use of Google or Bing for research with keywords and filters.
- Online Collaboration: Familiarity with platforms like Google Workspace (Drive, Classroom) or Microsoft Teams.
- Email Usage: Sending, receiving, and organizing emails via platforms like Gmail or Outlook.

4. Classroom Technology

- Interactive Whiteboards: Operating digital smartboards for interactive lessons.
- Projectors: Connecting and using projectors for visual presentations.
- Learning Management Systems (LMS): Managing courses and student performance on platforms like Moodle or Blackboard.
- Educational Apps: Utilizing apps like Kahoot, Quizizz, or Canva for student engagement.

5. Multimedia Skills

- Creating Multimedia Content: Recording and editing videos or audio for lessons.
- Basic Graphic Design: Designing posters or worksheets using Canva or Photoshop.
- Streaming and Sharing: Using platforms like YouTube, Zoom, or Google Meet for virtual classes.

6. Online Safety and Ethics

- Cybersecurity Basics: Protecting personal data and student information.
- Digital Etiquette: Teaching proper online behavior to students.
- Safe Browsing: Recognizing and avoiding phishing scams or harmful websites.

7. ICT Tools for Teaching

- Interactive Learning Platforms: Using tools like Google Classroom, Edmodo, or Microsoft Teams.
- Assessment Tools: Creating quizzes and assignments with tools like Google Forms, Quizlet, or Microsoft Forms.
- E-Books and Digital Content: Accessing and sharing educational resources like e-books, PDFs, or online tutorials.

8. Basic Troubleshooting

- Hardware Issues: Connecting peripherals (printers, projectors, webcams) and addressing common problems.
- Software Issues: Updating applications and resolving minor software errors.
- Internet Connectivity: Ensuring stable internet for seamless class sessions.

9. Continuous Learning

- Online Tutorials: Enrolling in online courses (e.g., on Coursera, Udemy) to upgrade skills.
- Workshops: Participating in ICT-related teacher training programs.
- Peer Collaboration: Learning from colleagues about effective ICT practices.

Concept, Terminology, and Operations Related to General Computer Usage

Computers are integral to modern life, requiring an understanding of basic concepts, terminology, and operations for effective usage. Below is a comprehensive overview:

1. Concept of Computers

- Definition: A computer is an electronic device capable of processing, storing, and displaying data based on user commands.
- Components:
 - Hardware: Physical components like CPU, monitor, keyboard, and mouse.
 - Software: Set of instructions or programs (e.g., MS Office, web browsers) that enable computers to perform tasks.

Functions:

- Input: Data entered into the computer (e.g., typing with a keyboard).
- Processing: Manipulating data using the CPU.
- Storage: Saving data (e.g., in hard drives or cloud storage).
- Output: Displaying processed information (e.g., on a monitor or printer).

2. Basic Terminology

Hardware Terms

- Central Processing Unit (CPU): The brain of the computer that processes data.
- RAM (Random Access Memory): Temporary memory used during processing.
- ROM (Read-Only Memory): Permanent memory that stores essential programs like the BIOS.

- Hard Drive (HDD) / Solid-State Drive (SSD): Devices for long-term data storage.
- Input Devices: Devices like keyboards, mice, scanners, and microphones used for input.
- Output Devices: Devices like monitors, printers, and speakers used to display or output information.

Software Terms

- Operating System (OS): System software that manages hardware and software (e.g., Windows, macOS, Linux).
- Application Software: Programs for specific tasks (e.g., MS Word, Google Chrome).
- Driver: Software enabling communication between hardware and the OS.
- Utility Software: Programs for maintenance tasks like virus scanning and file compression.

Networking Terms

- LAN (Local Area Network): A network within a small area, like a home or office.
- WAN (Wide Area Network): A network over a large area, like the internet.
- IP Address: Unique identifier for a device in a network.
- DNS (Domain Name System): Translates website names into IP addresses.

Data Terms

- Bit and Byte: Units of data. A byte equals 8 bits.
- File Extension: Suffix indicating file type (e.g., .docx, .jpg).
- Cloud Storage: Storing data online (e.g., Google Drive).

3. Operations in General Computer Usage

Basic Operations

- Starting and Shutting Down: Turning the computer on/off properly to avoid data loss.
- File Management:
 - Creating, renaming, copying, moving, and deleting files or folders.
 - Using external drives or cloud storage for backups.
- Using Applications: Opening and closing programs and switching between applications.
- Printing:
 - Connecting to printers and printing documents.
 - Configuring print settings like page layout and color options.

Internet Operations

- Web Browsing:
 - Accessing websites using browsers like Google Chrome or Firefox.
 - Using search engines for information retrieval.
- Emailing:
 - Composing, sending, receiving, and organizing emails.
 - Attaching files and images to emails.
- Downloading and Uploading:
 - Downloading files from websites.
 - Uploading documents or images to platforms.

Security Operations

- Setting Passwords: Protecting devices and accounts with strong passwords.
- Antivirus Software: Scanning for and removing malware.

6. Science and Research

- Data Analysis: Processing large datasets for scientific studies.
- Simulations: Testing theories and experiments in a virtual environment.
- Space Exploration: Designing and operating satellites and rovers.
- Weather Forecasting: Using supercomputers to predict climate patterns.

7. Government

- E-Governance: Online portals for tax filing, passport applications, and other services.
- Data Storage: Maintaining records of citizens, land, and resources.
- Policy Implementation: Monitoring and evaluation through computerized systems.
- Security: Surveillance and monitoring using AI and computer systems.

8. Entertainment

- Gaming: Advanced graphics and interactive gameplay in computer games.
- Media Production: Editing videos, photos, and audio for movies and music.
- Streaming Services: Watching content on platforms like Netflix, Amazon Prime, and YouTube.
- Virtual Reality (VR): Immersive experiences for entertainment and learning.

9. Transportation

- Traffic Control: Monitoring and managing traffic flow using computerized systems.
- Navigation: GPS for route planning and real-time updates.
- Ticket Booking: Online booking for flights, trains, and buses.
- Vehicle Automation: Use of AI in self-driving cars and advanced safety systems.

10. Manufacturing

- Automation: Use of robots and Al for faster production.
- Design: CAD (Computer-Aided Design) for product modeling and simulation.
- Inventory Management: Real-time tracking of stock and materials.
- Quality Control: Using sensors and software to ensure product standards.

11. Agriculture

- Precision Farming: Use of sensors and GPS for better crop management.
- Weather Monitoring: Predicting weather conditions for planning.
- Market Access: Selling produce online through e-commerce platforms.
- Irrigation Systems: Automated systems controlled by computers.

12. Personal Use

- Home Budgeting: Using software or spreadsheets for managing expenses.
- Online Shopping: Purchasing goods and services via e-commerce websites.
- Social Interaction: Staying connected with family and friends.
- Hobbies: Learning new skills, playing games, or editing photos and videos.

Section – I: Pedagogy In English language

Unit - I

Pedagogy in English Language: Learning English at the Elementary Level

Learning English at the elementary level is crucial for laying a strong foundation in communication and cognitive development. Pedagogical approaches and strategies in teaching English focus on making language learning accessible, engaging, and effective for young learners.

1. Concept of Pedagogy in English Language Teaching (ଇଂରାଜୀ ଭାଷା ଶିକ୍ଷାରେ ପେଡାଗୋଜିର ଧାରଣା)

Pedagogy refers to the methods and practices used by teachers to facilitate the learning process. In the context of **English language teaching**, it involves strategies designed to enhance language acquisition, comprehension, speaking, reading, and writing skills.

a. Approaches to Pedagogy in English

- Communicative Language Teaching (CLT) (ସଂବାଦ ଭାଷା ଶିକ୍ଷା): Focuses on teaching English through real-life communication and interactions.
- Task-Based Language Teaching (TBLT) (କାର୍ଯ୍ୟ-ଆଧାରିତ ଭାଷା ଶିକ୍ଷା): Encourages students to complete practical tasks using English, such as solving problems or giving presentations.
- Content and Language Integrated Learning (CLIL) (ସାହିତ୍ୟ ଏବଂ ଭାଷା ସମ୍ମିଶ୍ର ଶିକ୍ଷା): Uses subject content to teach English while helping students develop language skills alongside academic knowledge.
- Phonics Approach (ଫୋନିକ୍ସ ପ୍ରବୃତ୍ତି): Focuses on teaching the sounds of letters and syllables to help children read and pronounce words correctly.

2. Learning English at the Elementary Level (ମୂଳଭୂତ ୟରରେ ଇଂରାଜୀ ଶିକ୍ଷା)

At the elementary level, English learning should be focused on building basic language skills that will serve as a foundation for more advanced language use in later years.

a. Key Focus Areas in Elementary English Learning

- Listening (ଶୁଶିବା): Understanding simple spoken English through stories, songs, and dialogues.
- Speaking (କଥାବାର୍ତ୍ତା): Encouraging children to speak in English in informal settings, practicing pronunciation and vocabulary.
- Reading (ପାଠନ): Developing basic reading skills, such as decoding simple words and understanding short texts.
- Writing (ଲେଖନ): Teaching students how to write simple sentences, words, and paragraphs, focusing on proper grammar and spelling.

b. Pedagogical Techniques for Elementary English Learning

- Interactive Activities (ଆନୁସୂଚୀ କ୍ରିୟା): Using role-playing, group discussions, and games to engage students and make learning fun.
- Visual Aids (ଦୃଶ୍ୟ ସାହାୟକ): Incorporating pictures, flashcards, and videos to aid comprehension and make learning more engaging.

- Storytelling (ଗଳ୍ପ କଥା): Narrating simple stories to improve listening skills and vocabulary.
- Songs and Rhymes (ଗୀତ ଏବଂ ଛନ୍ଦ): Using songs and rhymes to help students learn new words and phrases while having fun.
- Repetition and Drills (ପୁନରାବୃତ୍ତି ଏବଂ ଅଭ୍ୟାସ): Repeated practice helps students internalize new words, sounds, and sentence structures.

3. Importance of Learning English (ଇଂରାଜୀ ଶିକ୍ଷାର ଗୁରୁତ୍ୱ)

Learning English at the elementary level is not only important for communication but also plays a vital role in cognitive, social, and academic development. It opens the doors to better opportunities and personal growth.

a. Academic Benefits (ଶିକ୍ଷାସମ୍ବନ୍ଧୀୟ ଲାଭ)

- Improved Reading and Writing Skills (ପଢ଼ାଇ ଏବଂ ଲେଖା ସ୍କିଲ୍ସରେ ସୁଧାର): English proficiency is essential for students to access learning materials, textbooks, and resources across subjects.
- Preparation for Higher Education (ଉଚ୍ଚ ଶିକ୍ଷା ପାଇଁ ପ୍ରସ୍ତୁଡି): A strong command of English is often required for success in higher education, as many academic programs use English as the medium of instruction.

b. Cognitive and Language Development (ଜ୍ଞାନିକ ଏବଂ ଭାଷା ବିକାଶ)

- Critical Thinking (ତର୍କସମ୍ମତ ଚିନ୍ତନ): Learning English helps children develop better problemsolving and analytical thinking skills.
- Brain Development (ମସ୍ଥିଷ ଜନ୍ନତି): Exposure to a second language enhances cognitive functions, including memory and concentration.

c. Social and Global Benefits (ସାମାଜିକ ଏବଂ ବିଶ୍ୱ ଲାଭ)

- Communication Across Cultures (ସାମାଜିକ ଏବଂ ସଂସ୍କୃତିକ ସଂଲାପ): English is a global language that helps people communicate across cultural and national boundaries.
- Career Opportunities (କେରିୟର ସୁଯୋଗ): Proficiency in English opens up job opportunities in various industries such as technology, business, healthcare, and tourism.

d. Personal Growth (ବ୍ୟକ୍ତିଗତ ବିକାଶ)

- Confidence Building (ଆମ୍ବିଶ୍ୱାସ ବୃଦ୍ଧି): Mastering English boosts self-confidence in children and enables them to participate actively in school activities.
- Cultural Awareness (ସଂସ୍କୃତିକ ଜାଗ୍ନକତା): Learning English allows students to understand and appreciate global literature, media, and cultural expressions.

4. Challenges in Learning English at the Elementary Level (ମୂଳଭୂତ ଷରରେ ଇଂରାଜୀ ଶିକ୍ଷାର ସମସ୍ୟା)

Despite the importance of English, some challenges may arise during the learning process at the elementary level:

a. Limited Exposure (ସୀମିତ ସମ୍ପର୍କ)

• Children may not be exposed to English frequently outside the classroom, which hinders their practice and retention.

b. Pronunciation and Fluency (ଉଚ୍ଚାରଣ ଏବଂ ପ୍ରବାହ)

Difficulty in mastering English sounds, accents, and fluency can discourage young learners.

c. Lack of Motivation (ପେରଣାର ଅଭାବ)

• If students do not see the practical relevance of English, they may lack motivation to learn the language actively.

d. Learning Resources (ଶିକ୍ଷା ସାଧନ)

 Limited access to quality English language learning resources can hinder effective teaching and learning.

Objectives of Learning English (In Terms of Content and Competence Specification)

Learning English has several key objectives that focus on content acquisition as well as the development of various competencies. These objectives guide the structure of English language teaching at various levels, ensuring that learners develop the necessary skills for effective communication, comprehension, and expression in English.

1. Content Objectives (ବିଷୟ ବୟୁ ଉଦ୍ଦେଶ୍ୟ)

Content objectives aim to ensure that students acquire essential knowledge and understanding of the English language. These include:

a. Vocabulary Development (ଶବ୍ଦକୋଷ ବିକାଶ)

• **Objective**: To introduce and expand students' vocabulary, including everyday words, academic terms, and specific subject-related vocabulary.

Content Specification:

- o Basic words and phrases related to daily life (e.g., food, family, weather, etc.).
- o Contextual vocabulary used in various subjects (e.g., science, mathematics).
- Synonyms and antonyms to increase word range and depth.

b. Grammar and Syntax (ବ୍ୟାକରଣ ଏବଂ ବିନ୍ୟାସ)

• **Objective**: To teach students the rules of sentence construction, tenses, punctuation, and syntax in English.

Content Specification:

- Parts of speech (nouns, verbs, adjectives, adverbs, etc.).
- o Sentence types (affirmative, negative, interrogative).
- o Usage of tenses (present, past, future), prepositions, conjunctions, and determiners.

c. Listening and Reading Comprehension (ଶୁଣିବା ଏବଂ ପାଠନ ଅନୁଭବ)

• **Objective**: To help students understand spoken and written English, enabling them to extract meaning, follow instructions, and analyze content.

Content Specification:

- Listening to simple conversations, stories, and instructions.
- Reading short passages, poems, and stories to identify main ideas and supporting details.
- o Identifying tone, mood, and purpose in written and spoken texts.

d. Writing and Speaking Skills (ଲେଖା ଏବଂ କଥାବାର୍ତ୍ତା କ୍ଷମତା)

 Objective: To develop students' ability to communicate effectively in both written and spoken English.

Content Specification:

- Writing simple sentences, paragraphs, and short essays.
- Speaking in clear, coherent sentences for social interactions, storytelling, and expressing opinions.
- Engaging in basic conversations and discussions with appropriate greetings, questions, and responses.

2. Competence Objectives (କ୍ଷମତା ଉଦ୍ଦେଶ୍ୟ)

Competence objectives focus on developing the ability to use English effectively in various real-world contexts, promoting communicative competence and practical language skills.

a. Communicative Competence (ସଂବାଦ କ୍ଷମତା)

Objective: To equip students with the ability to communicate in English in different social
and academic contexts.

Competence Specification:

- o Ability to express thoughts, feelings, and ideas in simple, clear English.
- Ability to engage in everyday conversations (introductions, ordering food, asking for directions, etc.).
- o Participating in discussions, debates, and group work in English.

b. Linguistic Competence (ଭାଷା କ୍ଷମତା)

 Objective: To ensure that students develop the skills to understand and use language structures accurately.

Competence Specification:

- Correct use of grammar, sentence structures, and vocabulary.
- Understanding the function and meaning of different linguistic elements (e.g., tense usage, articles, prepositions).

c. Cognitive Competence (ଜ୍ଞାନିକ କ୍ଷମତା)

• **Objective**: To develop critical thinking and analytical skills through the use of English in problem-solving and interpreting information.

Competence Specification:

- Ability to analyze texts, summarize information, and infer meaning from context.
- Problem-solving using language (e.g., understanding instructions, following procedures, etc.).

d. Sociolinguistic Competence (ସାମାଜିକ-ଭାଷା କ୍ଷମତା)

 Objective: To understand and use English appropriately in different social and cultural contexts.

Competence Specification:

- Ability to use formal and informal language as required by the situation.
- Understanding cultural nuances, idioms, and expressions in English communication.

e. Pragmatic Competence (ପ୍ରାଗ୍ମାଟିକ୍ କ୍ଷମତା)

- **Challenge**: Students from different cultural backgrounds may have varying expectations, communication styles, and ways of interpreting language.
- **Impact**: Misunderstandings may arise due to differences in cultural norms, idioms, or language use.

Solution:

- Incorporate culturally inclusive materials and examples that reflect diverse backgrounds.
- Encourage students to share their cultural experiences, fostering mutual respect and understanding in the classroom.

3. Different Learning Styles (ବିଭିନ୍ନ ଶିକ୍ଷା ପ୍ରତିଭା)

- **Challenge**: Learners have diverse learning styles—some may prefer visual learning, others may be auditory or kinesthetic learners.
- **Impact**: Teaching methods may not resonate with every student if only one learning style is used.

Solution:

- Employ a variety of teaching methods, including visual aids, group discussions, hands-on activities, and audio materials to cater to different learning preferences.
- Use technology, such as interactive apps, videos, and online games, to engage different learners.

4. Motivation and Engagement (ପ୍ରେରଣା ଏବଂ ଆଗ୍ରହ)

- **Challenge**: Students may have differing levels of motivation to learn the language, depending on their background, interests, or previous exposure to the language.
- Impact: Some students may find language learning exciting and relevant, while others may struggle with the perceived difficulty or irrelevance of learning the language.

Solution:

- Foster intrinsic motivation by connecting language learning to real-life situations and students' interests.
- Set achievable goals and celebrate small successes to build confidence and interest in learning.

5. Varying Educational Backgrounds (ବିଭିନ୍ନ ଶିକ୍ଷା ଇତିହାସ)

- **Challenge**: Students may come from different educational backgrounds, with varying levels of previous education or exposure to formal language instruction.
- Impact: This can lead to gaps in foundational knowledge, which makes it harder for some students to keep up with more advanced lessons.

Solution:

- Assess students' baseline knowledge and provide additional resources or support for those who need it.
- Offer remedial activities for students with gaps in their language skills to bring them up to speed.

Project-Based Assessment: Use long-term projects that require students to apply their listening, speaking, reading, and writing skills in a practical scenario (e.g., creating a report, giving a presentation).

CONTENTS

ଧ୍ୱନି ଓ ଏହାର ପ୍ରକାର –	1
ଲିଙ୍ଗ, ବଚନ, ପୁରୁଷ	5
ଶବ୍ଦ ଓ ଏହାର ପ୍ରକାର	5
ପଦ	10
ବିଶେଷ୍ୟ	10
ବିଶେଷଣ	14
ସର୍ବନାମ	19
ଅବ୍ୟୟ ପଦ	22
କ୍ରିୟା ପଦ	27
ସମାସ	33
କାରକ	41
ବିଭକ୍ତି ଓ ଏହାର ପ୍ରକାର	43
ବାକ୍ୟ ଓ ଏହାର ପ୍ରକାର	54
ବାକ୍ୟ ରୂପାନ୍ତର	56
ଟେନ୍ସ ବା କାଳ	
ବିପରୀତ ଶବ୍ଦ	62
ପ୍ରତିଶବ୍ଦ	83
ରଢି	96
ଲୋକବାଣୀ	98
ସନ୍ଧି ଓ ଏହାର ପ୍ରକାର	111
ଏକପଦୀକରଣ	
ତଦ୍ଧିତ	128
କୃବନ୍ତ	132
ଭପସର୍ଗ	134
ଅଳଙ୍କାର	138
ସୁଦ୍ଧ ଓ ଅଶୁଦ୍ଧ Error! Bookmark not d	efined.

ଧ୍ୟନି ଓ ଏହାର ପ୍ରକାର –

ଧ୍ୟନି ଓ ବର୍ଷ ମଧ୍ୟରେ ପ୍ରଭେଦ କ'ଣ ?

ମୁହଁରୁ ଉଚ୍ଚାରିତ ହେଲେ ତାହା ଧୁନି । ଧ୍ବନିର ଲିଖିତ ରୂପ ହେଉଛି ବର୍ଣ । ସୁତରୀ ବର୍ଷ ଅର୍ଥ ରୂପ ବା ଚିହ୍ନ । ଅ, ଆ, କ, ଖ ପ୍ରଭୃତି କହିବାବେଳେ ଧୁନି ସୃଷ୍ଟି ହୁଏ । ଆମେ ସେହି ଧୂନିକୁ ଶୁଣି ଅ, ଆ, କ, ଖ ପ୍ରଭୃତି ରୂପରେ ଲେଖୁ ରଖୁ । ଯାହା ଲେଖୁ ରଖୁ ତାହା ବର୍ଷ ବା ଲିପି । ବର୍ଷ ବା ଲିପି. ଅନେକ ଦିନ ପର୍ଯ୍ୟନ୍ତ ସ୍ଥାୟୀ ଭାବରେ ରହିଥାଏ । ଆମେ ସେଗୁଡ଼ିକୁ କହୁ ଅକ୍ଷର 'ଅର୍ଥାତ୍' ନ କ୍ଷର = ଅକ୍ଷର । ଆମ ଓଡ଼ିଆ ଭାଷାରେ 49 ଟି ବର୍ଷ ରହିଛି |

ବର୍ଣ୍ଣ କୁ ଆମେ ଦୁଇ ଭାଗରେ ବିଭକ୍ତ କରିପାରିବା ।

- (1) ସ୍ପର ବର୍ଣ୍ଣ
- (2) ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତ

ସ୍ୱରବର୍ତ୍ତ: ଯେଉଁ ଧ୍ୱନିଗୁଡ଼ିକ ଅନ୍ୟର ସାହାଯ୍ୟ ନନେଇ ଆପେ ଆପେ ଉଚ୍ଚାରିତ ହୁଅନ୍ତି, ସେଗୁଡ଼ିକ ସ୍ୱରବର୍ତ୍ତ । ଓଡ଼ିଆ ଭାଷାରେ '11' ଟି ସ୍ୱରବର୍ତ୍ତ ରହିଛି । ଯଥା- (ଅ, ଆ, ଇ, ଈ, ଉ, ଉ, ର, ଏ, ଐ, ଓ, ଔ) । ଏହାର ସଂଖ୍ୟା 11 ଥିଲେ ମଧ୍ୟ ଉଚ୍ଚାରଣ ଦୃଷ୍ଟିରୁ ଏହାର ସଂଖ୍ୟା ମାତ୍ର 8

ସ୍ୱରବର୍ତ୍ତ ଦୁଇପ୍ରକାର

- ହ୍ୟ ସ୍ବର
- ବୀର୍ଘ ସ୍ପର

ହ୍ରସ୍ତ ସ୍ପର - ଅ, ଇ, ଉ, ର ଦୀର୍ଘ ସ୍ପର- ଆ, ଈ, ଜ, ଏ, ଐ, ଓ, ଔ

ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣ :

ଯେଉଁ ଧ୍ୟନିଗୁଡ଼ିକ ସ୍ୱର ବର୍ତ୍ତର ସାହାଯ୍ୟ ବ୍ୟତୀତ ଉଚ୍ଚାରିତ ହୋଇପାରତ୍ତି ନାହିଁ, ସେଗୁଡ଼ିକୁ ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତ କହନ୍ତି । ଯଥା:କ, ଖ, ଗ, ଘ, ଡ, ଚ, ଛ, କ, ଝ, ଞ, ଟ, ଠ, ଡ, ଢ, ଶ, ତ, ଥ, ଦ, ଧ, ନ, ପ, ଫ, ବ, ଭ, ମ, ଯ, ର, ଳ, ଓ, ଶ, ଷ, ସ, ହ,ଠ, ଚନ୍ଦ୍ରବିନ୍ଦୁ ।

ସ୍ୱର ଓ ବ୍ୟଞ୍ଜନ ଧୁନି ମଧ୍ୟରେ ପାର୍ଥକ୍ୟ କଣ ?

ସ୍ଟର ଧ୍ବନି ସର୍ବଦା ସ୍ଥାଧୀନ କାହାର ଆଶ୍ରୟ ନ ନେଇ ଏଗୁଡ଼ିକ ଉଚ୍ଚାରିତ ହୋଇଥାନ୍ତି । ଅ' ଠାରୁ 'କ୍ଷ' ପର୍ଯ୍ୟନ୍ତ ଧ୍ବନି ଗୁଡ଼ିକ ସ୍ଟର ଧ୍ୱନି

ବ୍ୟଞ୍ଜନ ଧ୍ବନିଗୁଡ଼ିକ ସର୍ବଦା ସ୍ପର ଧ୍ୱନି ଉପରେ ନିର୍ଭରଶୀଳ । ତେଣୁ ବିନା ସ୍ପରର ସାହାଯ୍ୟରେ ଏଗୁଡ଼ିକ ଉଚ୍ଚାରିତ ହୁଅନ୍ତି ନାହିଁ । ଏଗୁଡ଼ିକ ସର୍ବଦା ଆଶ୍ୱୟୀ ସ୍ୱର ଦରକାର କରନ୍ତି ।

ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତର ବିଭାଗୀକରଣ । ଯେଉଁ ଧ୍ୱନିଗୁଡ଼ିକ ସ୍ପରଧ୍ବନିର ବିନା ସାହାଯ୍ୟରେ ଉଚ୍ଚାରିତ ହୋଇ ପାରତ୍ତି ନାହିଁ, ସେଗୁଡ଼ିକ ବ୍ୟଞ୍ଜନ ଧ୍ବନି । ବ୍ୟଞ୍ଜନ ଧ୍ବନିର ଲିତ ରୂପ ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତ । ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତଗୁଡ଼ିକ ସାଧାରଣତଃ 2 ଭାଗରେ ବିଭକ୍ତ

- (1) ବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ
- (2) ଅବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ

ବଗ୍ୟ ବ୍ୟଞ୍ଜନ :

ଯେଉଁ ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତଗୁଡ଼ିକ ଉଚ୍ଚାରଣ କଲାବେଳେ କଣ୍ଡ, ତାଳୁ, ମୂର୍ବା, ଦନ୍ତ କିମ୍ବା ଓଷକୁ ବର୍ଷ କରିଥାଏ ସେଗୁଡ଼ିକୁ ବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତ କହନ୍ତି । "କ' ଠାରୁ 'ମ' ପର୍ଯ୍ୟନ୍ତ 25 ବର୍ତ୍ତ

ବଗ୍ୟ ବ୍ୟଞ୍ଜନ । ଉଚ୍ଚାରଣ ସ୍ଥାନ ଅନୁସାରେ ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତଗୁଡ଼ିକ 5 ଭାଗରେ ବିଭକ୍ତ ।

- (i) 'କ' ବର୍ଗ୍ୟ କ, ଖ, ଗ, ଘ, ଙ କଣ୍ଟ୍ୟବର୍ତ୍ତ (ଉଚ୍ଚାରଣ ସ୍ଥାନ କଣର)
- (ii) 'ଚ' ବର୍ଗ୍ୟ ଚ, ଛ, ଜ, ଝ, ଞ ତାଲବ୍ୟ ବର୍ତ୍ତ (ଉଚ୍ଚାରଣ ସ୍ଥାନ ତାଳୁ'ରୁ)
- (iii) 'ଟ' ବର୍ଗ୍ୟ ଟ, ଠ, ଡ଼, ଢ, ଣ ମୁର୍ଧ୍ୟନ୍ୟ ବର୍ଣ୍ଣ (ଉଚ୍ଚାରଣ ସ୍ଥାନ ମୂର୍ଦ୍ଧା ରୁ (ଉପର ଦାନ୍ତର ମାଢିରୁ)
- (iii) ତ' ବର୍ଗ୍ୟ ତ, ଥ, ଦ, ଧ, ନ ଦନ୍ତ୍ୟ ବର୍ତ୍ତ (ଉଚ୍ଚାରଣ ସ୍ଥାନ ଦାନ୍ତର)
- (iv) 'ପ' ବର୍ଗ୍ୟ ପ, ଫ, ବ, ଭ, ମ ଓ଼ଷ ବର୍ଷ (ଜଚ୍ଚାରଣ ସ୍ଥାନ ଓଠ ରୁ)

ଅବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ :

25 ବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ (କ' ଠାରୁ 'ମ' ପର୍ଯ୍ୟନ୍ତ) କୁ ବାଦ ଦେଲେ ଅନ୍ୟ ବ୍ୟଞ୍ଜନଗୁଡ଼ିକ 'ଅବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ । ଅବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ 3 ଭାଗରେ ବିଭକ୍ତ ।

- > ଅନ୍ତସ୍ଥ ବର୍ଣ୍ଣ
- > ଉଷ ବର୍ଣ୍ଣ
- > ଅଯୋଗବାହ ବର୍ଣ୍ଣ

- 1. ଅ**ବଃୟ ବର୍ଣ୍ଣ-** କ୍ଷ, ୟ, ର, ଳ, ଲ, ଓ । ଉଚ୍ଚାରଣ ବେଳେ ଏଗୁଡିକ ସ୍ପର ଓ ବ୍ୟଞ୍ଜନର ମଧ୍ୟବର୍ତ୍ତୀ ତେଣୁ ଅବଃୟ ବର୍ଣ୍ଣ ।
- 2. **ଉପ୍ମ ବର୍ତ୍ତ-** ଶ, ଷ, ସ, ହ ଏଗୁଡିକର ଉଚ୍ଚାରଣ ବେଳେ ଉପ୍ମ ବାୟୂ ନିର୍ଗତ ହୋଇଥାଏ
- 3. ଅଯୋଗବାହ ବର୍ଣ୍ଣ- ଅନୁସାର, ଚନ୍ଦ୍ରବିନ୍ଦୁ, ବିସର୍ଗ | ଏହି ବର୍ଣ୍ଣ ସମୂହ ସ୍ୱର କିମ୍ବା ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣର ଆଶ୍ରୟ ବିନା ଉଚ୍ଚାରିତ ହୋଇପାରତ୍ତି ନାହିଁ | ଏଣ୍ଡ ଏଗୁଡିକ ଆଶ୍ରିତ ବର୍ଣ୍ଣ
- 4. ଅନୁସନିକ ବର୍ଣ୍ଣ- ପ୍ରତ୍ୟକ ବର୍ଗ୍ୟର ପଞ୍ଚମ ବର୍ଣ୍ଣ ଢ, ଞ, ଶ, ନ, ମ, ଅନୁସାର, ଚନ୍ଦ୍ରବିନ୍ଦୁ ର ଉଚ୍ଚାରଣ ନାସିକାର ସାହାଯ୍ୟ ନିଆଯାଇଥିବାରୁ ଏଗୁଡିକ 'ଅନୁସନିକ ବର୍ଣ୍ଣ' କୁହାଯାଏ |

ମାତ୍ରା- ସ୍ୱରବର୍ତ୍ତ ଗୁଡିକର ସାଙ୍କେତିକ ରୁପକୁ ମାତ୍ରା କୁହାଯାଏ ଆ କାର, ଇ କାର, ଈ କାର , ଉ କାର , ଉ କାର, ଏ କାର , ଐ କାର , ଓ କାର , ଔ କାର

ଫଳା- ବ୍ୟଞ୍ଜନ ବର୍ତ୍ତର ସାଙ୍କେତିକ ରୂପକୁ ଫଳା କୁହାଯାଏ ନ ଫଳା, ମ ଫଳା, ୟ ଫଳା, ର ଫଳା, ଳ ଫଳା, ଲ ଫଳା, ୱ ଫଳା, ବ ଫଳା

ପ୍ରଶ୍ନ: ପ୍ରତ୍ୟେକ ଜୀବ ନିଜ ମନର ଭାବକୁ କିପରି ପ୍ରକାଶ କରିଥାନ୍ତି ?

- (କ) ଧୁନିଦ୍ୱାରା
- (ଖ) ଅଙ୍ଗଭଙ୍ଗୀଦ୍ୱାରା
- (ଗ) ଇଙ୍ଗିତ ଦ୍ୱାରା
- (ଘ) ଧୁନି ଓ ଅଙ୍ଗଭଙ୍ଗୀଦ୍ୱାରା

ଉତ୍ତର – ଘ

ପ୍ରଶ୍ୱ: ଧ୍ବନିର ଲିଖିତ ରୂପକୁ କ'ଣ କହନ୍ତି ?

- (କ) ବର୍ଣ୍ଣ
- (ଖ) ଅକ୍ଷର
- (ଗ) ଲିପି
- (ଘ) ଲିଖିତ ଧ୍ରନି

ଉତ୍ତର – କ

ପ୍ରଶ୍ନ: ଧ୍ବନି ପଦ୍ଧତି ବଦ୍ଧ ନ ହେଲେ କ'ଣ ହୁଏ ?

- (କ) ପ୍ରକାଶିତ ହୁଏ ନାହିଁ
- (ଖ) ଅର୍ଥପୂର୍ଣ୍ଣ ହୁଏ ନାହିଁ
- (ଗ) ପ୍ରକାଶିତ ହୁଏ
- (ଘ) ଅର୍ଥ ପୂର୍ଣ୍ଣ ହୁଏ

ଉତ୍ତର -ଖ

ପ୍ରଶ୍ନ: ବର୍ଷ ର ଉଚ୍ଚାରିତ ରୂପକୁ କଣ କୁହାଯାଏ ?

- (କ) ଉପବର୍ଷ
- (ଖ) ଉଚ୍ଚାରିତ ବର୍ଣ୍ଣ
- (ଗ) ଧ୍ବନି
- (ଘ) ଲିପି

ଉତ୍ତର – ଗ

1. ଓଡିଆ ରେ କେତୋଟି ସ୍ମର ଧ୍ୱନି ରହିଛି ? (ଖ) ୧୧ଟି (କ) ୮ଟି (ଗ) ୧୫ଟି (ଘ) ୧୦ଟି ଉତ୍ତର - କ ପ୍ରଶ୍ନ: ଯେଉଁ ଧ୍ୟନି ଗୁଡିକ ସ୍ଲରଧ୍ୟନି ବିନା ସହାୟତାରେ ଏକାକୀ ଉଚ୍ଚରିତ ହୋଇପାରନ୍ତି ନାହିଁ ସେଗୁଡିକୁ କଣ କୁହାଯାଏ ? (କ) ସ୍ଥରଧ୍ୱନି (ଖ) ବ୍ୟଞ୍ଜନ ଧ୍ୱନି (ଗ) ବିସର୍ଗ ଧ୍ୱନି (ଘ) ଯୁକ୍ତ ଧ୍ୱନି ଉତ୍ତର – ଖ ପ୍ରଶ୍ନ: ପ, ଫ, ବ, ଭ, ମ ଭଚ୍ଚାରଣ ଦୃଷ୍ଟିରୁ କେଉଁ ବ୍ୟଞ୍ଜନ ଅଛି ? (କ) ଦନ୍ତ୍ୟ ବ୍ୟଞ୍ଜନ (ଖ) କଣ୍ୟ ବ୍ୟଞ୍ଜନ (ଗ) ତାଲବ୍ୟ ବ୍ୟଞ୍ଜନ (ଘ) ଓଷ୍ୟ ବ୍ୟଞ୍ଜନ ଉତ୍ତର – ଘ ପ୍ରଶ୍: କେଉଁ ଧ୍ୱନି ମୂର୍ଦ୍ଧା ସହିତ ମିଳିତ ହୋଇ ଉଚ୍ଚରିତ ହୋଇଥାଏ ? (ଖ) ମୂର୍ଦ୍ଧଶ୍ୟ ବର୍ଣ୍ଣ (କ) କାକଲ୍ୟ ବ୍ୟଞ୍ଜନ (ଗ) ତାଲବ୍ୟ ବ୍ୟଞ୍ଜନ (ଘ) ଓଷ୍ୟ ବ୍ୟଞ୍ଜନ ଉତ୍ତର - ଖ ପ୍ରଶ୍ମ: ଓଡିଆ ରେ କେତୋଟି ଅବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣ ରହିଛି ? (ଖ) ୧୧ଟି (କ) ୧୪ଟି (ଗ) ୧୫ଟି (ଘ) ୧୦ଟି ଉତ୍ତର – କ ପ୍ରଶ୍ନ: ଓଡିଆ ଗ୍ରାମାର ରେ ତୋଟାଳ କେତୋଟି ବର୍ଣ୍ଣ ରହିଛି ? (କ) ୪୮ଟି (ଖ) ୪୭ଟି (ଗ) ୫୧ଟି (ଘ) ୫୦ଟି ଉତ୍ତର – ଘ ପ୍ରଶ୍ୱ: ଇଂରାଜୀ ଭାଷାର ଲିପିର ନାମ କଣ? (ଖ) ପାସି (କ) ରୋମାନ (ଘ) କୌଣସିଟି ନୁହେଁ (ଗ) ଗୁରୁମୁଖ୍ ଉତ୍ତର - କ ପ୍ରଶ୍ନ: ବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣକୁ କେତୋଟି ବର୍ଗ ରେ ବିଭକ୍ତ କରାଯାଇଛି (କ) ୫ଟି (ଖ) ୭ଟି

(ଘ) ୨ଟି

ବର୍ଗ୍ୟ ବ୍ୟଞ୍ଜନ କୁ ୫ ଟି ବିଭାଗରେ ବିଭକ୍ତ କରାଯାଇଛି । ଯେମିତି (କଣ୍ୟ

ବର୍ଗ, ତାଲବ୍ୟ ବର୍ଗ, ମୂର୍ଦ୍ଧନ୍ୟ ବର୍ଗ, ଦନ୍ତ୍ୟ ବର୍ଗ, ଓଷ୍ୟ ବର୍ଗ)

١	(ଖ) ସ୍ଟର ବର୍ଣ୍ଣ ସହିତ ବା	^{୳ଞ୍ଜ} ନ ବର୍ତ୍ତ ର ମିଶ୍ରଣ	
	(ଗ) ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣର ସା		
	(ଘ) ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣ ସହିତ		
	ଉତ୍ତର – କ		
	ପ୍ରଶ୍ନ: ନିମ୍ନଲିଖିତ ମଧ୍ୟରୁ	କେଉଁ ବର୍ଶର ସାଙ୍କେତିକ ରୂପ ନାହିଁ ?	
	(କ) ଆ	(ଖ) ଇ	
	(ଗ) ଅ	(ଘ) ଭ	
	ଉତ୍ତର – ଗ		
	ପ୍ରଶ୍ନ: ସଂଷ୍କୃତ ଓ ହିନ୍ଦୀ ଭ	ାଷାର ଲିପିର ନାମ କଣ?	
	(କ) ରୋମାନ	(ଖ) ଦେବନାଗରୀ	
	(ଗ) ଗୁରୁମୁଖ୍	(ଘ) କୌଣସିଟି ନୁହେଁ	
	ଉତ୍ତର – ଖ		
	ପ୍ରଶ୍ନ: କାଠ, ପଥର, ତାଳ	ପତ୍ର, କାଗଜ ଆଦିର ଚିକ୍କଣ ପୃଷାରେ ଧ୍ବନି	
	ଲେଖା ହେଇଥିବାରୁ ତାବ	ନୁ କ'ଣ କୁହାଯାଏ ?	
	(କ) ଲିପି	(ଖ) ବର୍ତ୍ତ	
	(ଗ) ଅକ୍ଷର	(ଘ) କ୍ଷର	
	ଉତ୍ତର – କ		
I	1000	ତ ରୂପ ତଥା ସାଙ୍କେତିକ ରୂପ କୁ କ'ଣ କହଋି	
	(କ) ଲିପି	(ଖ) ଭାଷା	
	(ଗ) ଆକୃତି	(ଘ) ବର୍ଷ	
	ଉତ୍ତର – ଘ		
		୍ଥାୟୀରୁପ ଦେଉଥିବାରୁ ତାକୁ କଣ କୁହାଯାଏ	
	(କ) ବର୍ଷ	(ଖ) ଲିପି	
	(ଗ) ଅକ୍ଷର	(ଘ) ଆକୃତି	
	ଉତ୍ତର – ଗ		
	ପ୍ରଶ: ସ୍ପର ଧୃନି କାହାକୁ ଏ		
	ସାହାଯ୍ୟ ନେଇ ଆପେ ଆପେ ଉଚ୍ଚାରିତ ହୁଏ		
(ଖ) ଯେଉଁ ଧ୍ୱନି ଅନ୍ୟର ସାହାଯ୍ୟ ନେଇ ଉଚ୍ଚାରିତ ହୁଏ । (ଗ) ଯେଉଁ ଧ୍ୱନି ଅନ୍ୟର ଅକୁ ସାହାଯ୍ୟରେ ଡ଼ଳାରିତ			
	ଉତ୍ତର – କ	co cao viô ooiôo o4 oio o'a	
	ଧୁକା: ଧ୍ବର ପୃନ ସାହାଯ୍ୟ କହନ୍ତି ?	ରେ ଯେଉଁ ଧ୍ବନି ଉଚ୍ଚାରିତ ହୁଏ ତାକୁ କ'ଣ	
	(କ) ସ୍ଟର ବର୍ତ୍ତ	(ଖ) ବ୍ୟଞ୍ଜନ ବର୍ଣ୍ଣ	
	(ଗ) ମିଶ୍ରିତ ସ୍ୱରବର୍ଣ୍ଣ	(ଘ) ଯୁକ୍ତ ବର୍ଣ୍	
	ଉତ୍ତର – ଖ		

ପ<mark>୍ରଶ୍ନ: ମାତ୍ରା କାହାକୁ କୁହାଯାଏ ?</mark> (କ) ସ୍ଟର ବର୍ତ୍ତ ର ସାଙ୍କେତିକ ରୂପ

(ଗ) ୬ଟି ଉତ୍ତର – କ

ବ୍ୟକ୍ତିବାଚକ କହିଲେ କେବଳ ଲୋକର ନାମ ଏହା ନୁହେଁ, ଏହା କୌଣସି ଗ୍ରାମ, ସହର, ଦେଶ, ନଦୀ, ହ୍ରଦ, ପର୍ବତ ଇତ୍ୟାଦିର ନାମକୁ ବୁଝାଏ । ଯେକୌଣସି ଗୋଟିଏ ନାମକୁ ବୁଝାଉଥିବାରୁ ଏହା ନାମବାଚକ

ଯଥା :-ରାମ, ଗଙ୍ଗା, କଟକ, ଓଡ଼ିଶା, ଭାରତ, ବୈଶାଖ ଇତ୍ୟାଦି

ଜାତିବାଚକ ବିଶେଷ୍ୟ : ଯେଉଁ ବିଶେଷ୍ୟ ପଦ ଗୋଟିକୁ ନ ବୁଝାଇ ଗୋଟିଏ ଜାତି ବା ଗୋଷ୍ପୀକୁ ବୁଝାଏ, ତାକୁ ଜାତି ବାଚକ ବିଶେଷ୍ୟ କହନ୍ତି

ଉଦାହରଣ- ମାଛ, ଗାଈ, ମଣିଷ, ବାଳକ, ନେତା, ମନ୍ତ୍ରୀ.... ଇତ୍ୟାଦି

ବୟୁବାଚକ ବିଶେଷ୍ୟ :

ଯେଉଁ ବିଶେଷ୍ୟପଦ କୌଣସି ବସ୍ତୁ ବା ପଦାର୍ଥର ନାମକୁ ବୁଝାଏ, ତାକୁ ବୟୁବାଚକ ବିଶେଷ୍ୟ କହନ୍ତି । ଉଦାହରଣ - ଇଟା, ପଥର, ଲୁହା, ସୁନା, ମାଟି, ପାଣି ଇତ୍ୟାଦି

ଗୁଣବାଚକ ବିଶେଷ୍ୟ :

ଯେଉଁ ବିଶେଷ୍ୟ ପଦ କୌଣସି । ନିର୍ଦ୍ଦିଷ୍ଟ ନାମକୁ ବୁଝାଏ, ତାକୁ ଗୁଣବାଚକ ବିଶେଷ୍ୟ । କହନ୍ତି । ଯଥା:- ଭଦ୍ରତା, ନମ୍ରତା, ସାଧୁତା, ଦୟା, କ୍ଷମା,

ସୌନ୍ଦର୍ଯ୍ୟ, ସରଳତା ଇତ୍ୟାଦି ।

ଗୁଣବାଚକ ବିଶେଷ୍ୟ ପଦକୁ ଦେଖି ହୁଏ ନାହିଁ କି ସ୍ପର୍ଶ କରି ହୁଏ ନାହିଁ । ଏହାକୁ କେବଳ ଅନୁଭବ କରିହୁଏ । କିନ୍ତୁ ବ୍ୟକ୍ତିବାଚକ, ଜାତିବାଚକ, ବୟୁବାଚକ ବିଶେଷ୍ୟ ପଦ ଗୁଡ଼ିକୁ ଦେଖୁ ହୁଏ, ସ୍ପର୍ଶ କରି ହୁଏ । ବିଶେଷ୍ୟ ପଦଟିଏ କହିବା ବେଳେ ଏହି ସୃକ୍ଷ୍ମ ପ୍ରଭେଦଟିକୁ ଭାବିବାକୁ ପଡ଼ିବ]

କ୍ରିୟାବାଚକ ବିଶେଷ୍ୟ :

ଯେଉଁ ବିଶେଷ୍ୟ ପଦ କୌଣସି କ୍ରିୟା ବା କାର୍ଯ୍ୟର ନାମକୁ ବୁଝାଏ, ତାକୁ କିୟା ବାଚକ ବିଶେଷ୍ୟ କହନ୍ତି ।

ଯଥା:-ଖାଇବା (ଗୋଟିଏ କାର୍ଯ୍ୟର ନାମ)

ପଠନ (ଗୋଟିଏ କାର୍ଯ୍ୟର ନାମ)

ପ୍ରକା (ଗୋଟିଏ କାର୍ଯ୍ୟର ନାମ)

ରୋଷେଇ (ଗୋଟିଏ କାର୍ଯ୍ୟର ନାମ)

ବିଶେଷ୍ୟ କହିଲେ ବ୍ୟକ୍ତି, ଜାତି, ବସ୍ତୁ, ଗୁଣ ବା କ୍ରିୟା - ଯେକୌଣସି ଗୋଟିଏ 'ନାମ' କୁ ବୁଝିବାକୁ ହେବ ।ଏହା ଏକ ନାମକୁ ଚିହ୍ନଟ କରୁଥିବା ଶବ୍ଦ |

ପୁଶ୍ୱ: ମହାନଦୀ ଭାରତର ବଡ ନଦୀ ଅଟେ । ରେଖାଙ୍କିତ ପଦଟିର ବିଶେଷ୍ୟ ସ୍ଥିର କର ?

(କ) ନାମ / ସଂଜ୍ଞା

(ଖ) ଜାତ

(ଗ) ଗୁଣ

(ଘ) କ୍ରିୟା

ଉତ୍ତର - କ

ପ୍ରଶ୍ନ: ଲୋକଙ୍କ ମାନଙ୍କ ମଧ୍ୟରେ ଭଦ୍ରତା ରହିବା ଉଚିତ୍ । ରେଖାଙ୍କିତ ପଦଟିର ବିଶେଷ୍ୟ ସ୍ଥିର କର ।

(କ) ବ୍ୟକ୍ତି

(ଖ) ଜାତି

(ଗ) ଗୁଣ

(ଘ) କ୍ରିୟା

ଉତ୍ତର -ଗ

ପ୍ରଶ୍ମ: ଯେଉଁ ପଦ କୌଣସି ବ୍ୟକ୍ତି, ଜାତି, ବସ୍ତୁ, ଗୁଣ ଓ କ୍ରିୟାର ' ନାମକୁ ବୁଝାଏ ତାହାକୁ କଣ କୁହାଯାଏ ।

(କ) ସବିନାମ

(ଖ) ବିଶେଷଣ

(ଗ) ଅବ୍ୟୟ

(ଘ) ବିଶେଷ୍ୟ

ଉତ୍ତର - ଘ

ପଶ୍ଚ: ସକାଳ ଚଲା ଦେହ ପାଇଁ ଭଲ ଡାକ୍ତର କହିଛନ୍ତି ରେଖାଙ୍କିତ ପଦଟିର ବିଶେଷ୍ୟ ନିର୍ଣ୍ଟିୟ କର ?

(କ) ଜାତି

(ଖ) ଗୁଣ

(ଗ) ବ୍ୟକ୍ତି

(ଘ) କ୍ରିୟା

ଉତ୍ତର - ଘ

ପୁଶ୍ୱ: ସକାଳ ପଢା ମନେ ରହିଥାଏ। ରେଖାଙ୍କିତ ପଦଟିର ବିଶେଷ୍ୟ ସ୍ଥିର କର

(କ) ଗୁଣ

(ଖ) କ୍ରିୟା

(ଗ) ବସ୍ତୁ

(ଘ) ଜାତି

ଉତ୍ତର - ଖ

ପ୍ରଶ୍ୱ: ସେମାନେ ଲେଖିଛନ୍ତି । ରେଖାଙ୍କିତ ପଦଟି କେଉଁ ଶ୍ରେଣୀର ଚିହ୍ନଟ କର ?

(କ) କ୍ରିୟା ବାଚକ ବିଶେଷ୍ୟ (ଖ) କ୍ରିୟାପଦ

(ଗ) ଗୁଣବାଚକ ବିଶେଷ୍ୟ (ଘ) ଜାତିବାଚକ ବିଶେଷ୍ୟ

ଉତ୍ତର - ଖ

ପ୍ରଶ୍ନ: ଗୋପବନ୍ଧୁ ଓଡ଼ିଶାର <u>ଗାନ</u>୍ଧୀ ଥିଲେ । ରେଖାଙ୍କିତ ପଦଟିର ବିଶେଷ୍ୟ ନିଶ୍ଚିୟ କର ?

(କ) ବ୍ୟକ୍ତି

(ଖ) ଜାତି

(ଗ) ଗୁଣ

(ଘ) କ୍ରିୟା

ଉତ୍ତର - ଖ

ପ୍ରଶ୍ନ: ଅସଂପୃକ୍ତ ବିଶେଷ୍ୟ ପଦକୁ ପୃଥକ କର ।

(କ) ହିମାଳୟ

(ଖ) ବୈତରଣୀ

(ଗ) ଗୋନାସିକା

(ଘ) ଦେଓମାଳୀ

ଉତ୍ତର – ଖ

ହିମାଳୟ, ,ଗୋନାସିକା, ଦେଓମାଳି ସବୁ ପର୍ବତ ର ନାମ କିନ୍ତୁ ବୈତରଣୀ ଏକ ନଦୀ ର ନାମ ଅଟେ |

Pedagogy in Mathematics:

Unit - 1

Mathematics Education in Schools

Nature of Mathematics

Mathematics is a discipline that is defined by several key features, such as **exactness**, **systematic structure**, **patterns**, and **preciseness**. Understanding these characteristics is essential for both teachers and learners in mathematics education. Let's break down these features:

1. Exactness (ସଠିକତା)

Definition: Mathematics is known for its exactness. Every concept, theorem, or solution
must be logically correct and precise. There is no room for ambiguity or approximation in
mathematical reasoning.

Importance:

- This exactness helps ensure that mathematical results are universally applicable, irrespective of the situation.
- It guarantees logical consistency and builds a reliable foundation for problemsolving.
- **Example**: In solving equations, each step follows a strict rule (like the distributive property) that cannot be deviated from for the result to be accurate.

2. Systematic (ବ୍ୟବସ୍ଥିତ)

 Definition: Mathematics follows a systematic structure. It is not a random collection of facts but a coherent system of concepts that are built upon each other. Each concept logically follows from previous ones, and this organization is key to understanding more advanced topics.

Importance:

- The systematic nature of mathematics makes it easier for learners to progress from basic concepts to more complex ideas.
- It helps students recognize the hierarchical nature of mathematics, where learning builds on prior knowledge.
- **Example**: Arithmetic forms the foundation of algebra, which in turn lays the groundwork for calculus and higher-level mathematics.

3. Patterns (ପ୍ରତିକୃତି)

- **Definition**: Mathematics is inherently based on **patterns**. Recognizing patterns helps in identifying regularities in numbers, shapes, or even equations. This can lead to the discovery of new mathematical truths or generalizations.
- Importance:

- Identifying patterns makes problem-solving faster and more intuitive. Students can predict outcomes and create shortcuts for complex calculations.
- It aids in fostering mathematical thinking and logical reasoning, encouraging students to find solutions beyond rote memorization.
- **Example**: In arithmetic, the sequence of even numbers (2, 4, 6, 8, ...) forms a simple pattern. Recognizing this pattern helps students understand number properties and relationships.

4. Preciseness (ନିକ୍ଷିପ୍ତତା)

Definition: Mathematics requires preciseness. Every term, symbol, or operation must be
defined clearly, and results must be presented with exactness. There is little to no room for
imprecision in mathematical work.

Importance:

- Precise language and definitions ensure clear communication and understanding in mathematics, especially in problem-solving and proofs.
- Mathematical errors often occur due to a lack of precision in either understanding or computation.
- **Example**: The expression "x + y = 5" is precise because both variables and the operation are clearly defined. Any deviation from this precise format would lead to misinterpretation or incorrect results.

Aims and Objectives of Teaching Mathematics

Mathematics is a foundational subject in the education system, contributing to a learner's cognitive development and providing essential skills for problem-solving, logical reasoning, and everyday decision-making. The aims and objectives of teaching mathematics are designed to build a strong mathematical foundation, equip students with necessary skills, and foster a deep understanding of mathematical concepts.

1. Aims of Teaching Mathematics (ଗଣିତ ଶିକ୍ଷାର ଭଦେଶ୍ୟ)

The **aims** of teaching mathematics are broader goals that guide the teaching process and the outcomes expected from students:

- Development of Logical and Analytical Thinking (ତାର୍କିକ ଏବଂ ବିଶ୍ଲେଷଣାତ୍ପକ ଚିନ୍ତନର ବିକାଶ):
 - Mathematics encourages the development of logical reasoning, allowing students to approach problems systematically and think critically.
- Enhancing Problem-Solving Skills (ସମସ୍ୟା ସମାଧାନ କୁଶଳତାର ବୃଦ୍ଧି):
 - Teaching mathematics aims to develop students' ability to solve real-world and theoretical problems using mathematical tools, concepts, and strategies.
- Fostering Conceptual Understanding (ସାଙ୍ଗିକ ବୁଝା ଅନ୍ତର୍ଗତ କରାଯିବା):
 - Mathematics education focuses on helping students grasp the concepts underlying mathematical operations, such as addition, subtraction, multiplication, and division, rather than just memorizing procedures.
- Promoting Creativity and Innovation (ସୃଜନାତ୍ପକତା ଏବଂ ନୂତନତା ପ୍ରୋହାହିତ କରିବା):

- Mathematics fosters a creative mindset in students, enabling them to explore and find innovative solutions to problems.
- Developing a Scientific Attitude (ବିଜ୍ଞାନିକ ଦୃଷ୍ଟିକୋଶର ବିକାଶ):
 - By learning mathematics, students develop an analytical approach to problemsolving and can apply mathematical thinking in science, engineering, economics, and other fields.

2. Objectives of Teaching Mathematics (ଗଣିତ ଶିକ୍ଷାର ଭଦେଶ୍ୟ)

The **objectives** are specific, measurable outcomes that align with the broader aims and define what students should achieve through learning mathematics:

- Mastering Basic Mathematical Skills (ମୂଳ ଗଣିତ କୁଶଳତାର ଆଧ୍କାର):
 - Students should acquire proficiency in basic arithmetic skills (addition, subtraction, multiplication, division) and mathematical operations (such as fractions, decimals, and percentages).
- Building Mathematical Vocabulary (ଗଣିତ ଶବ୍ଦଭଣାର ଗଠନ):
 - It is important for students to understand and use correct mathematical terms like sum, difference, product, quotient, angle, etc., which are essential for effective communication and problem-solving.
- Developing Logical Thinking and Reasoning Skills (ତାର୍କିକ ଚିତ୍ତନ ଓ ତର୍କ କୁଶଳତାର ବିକାଶ):
 - Students should be able to apply logical reasoning to solve mathematical problems, prove statements, and justify solutions.
- Cultivating the Ability to Use Mathematics in Daily Life (ଦୈନିକ ଜୀବନରେ ଗଣିତ କୁ ବ୍ୟବହାର କରିବା ନିପଣତା ଉଭିର୍ଣ୍ଣ କରିବା):
 - Mathematics should help students solve real-world problems such as budgeting, measuring, planning, and making informed decisions.
- Understanding Advanced Mathematical Concepts (ଉନ୍ନତ ଗଣିତ ଧାରଣାର ଅନ୍ତର୍ଗତ ସମ୍ମ):
 - As students progress, they should understand advanced concepts like algebra, geometry, trigonometry, and calculus, and how these topics are interconnected.
- Encouraging a Positive Attitude Toward Mathematics (ଗଣିତ ପ୍ରତି ସକାରାତ୍ପକ ଦୃଷ୍ଟିକୋଣ ବୃଦ୍ଧି):
 - An objective is to motivate students to view mathematics as an interesting and useful subject, encouraging a growth mindset where students believe they can improve their mathematical skills with practice.
- Promoting Mathematical Communication (ଗଣିତ ସଂବାଦ ପ୍ରୋହାହିତ କରିବା):
 - Students should be able to express mathematical ideas and reasoning clearly, both verbally and in writing, to share their understanding with others.
- Facilitating Application of Mathematics in Other Disciplines (ଅନ୍ୟ ବିଷୟରେ ଗଣିତ ଦ୍ୱାରା ଆବେଦନ ସହଯୋଗ କରିବା):
 - Mathematics is essential in fields like science, engineering, finance, and technology.
 The objective is to equip students with the skills to apply their mathematical knowledge in other subject areas.

• **Student-Centered**: Students take an active role in their learning, often working in groups to solve problems and complete tasks.

Role of the Teacher:

- The teacher acts as a **guide**, helping students to organize and understand the activities, providing support and resources when necessary.
- The teacher encourages group work and hands-on experimentation that leads to selfdiscovery and understanding.

Advantages:

- · Makes learning engaging and fun for students.
- Promotes collaborative learning, where students learn from one another.
- Helps students to apply abstract mathematical concepts to real-world situations.
- Fosters the development of problem-solving skills.

Example:

• In teaching **geometry**, students might create their own geometric shapes using **paper**, **scissors**, and **glue**. This hands-on activity helps them understand concepts like symmetry, angles, and properties of shapes by actively constructing them.

Comparison of the Two Approaches:

Constructivist Approach	Activity-Based Approach
Focuses on understanding and constructing	Focuses on learning through active
knowledge through exploration.	participation in hands-on activities.
Encourages problem-solving and critical	Emphasizes experimentation and practical
thinking.	application.
Learning is self-directed , with students building	Learning is interactive and collaborative,
on prior knowledge.	often involving group work.
Teachers act as facilitators and guides in the	Teachers provide materials and structure for
learning process.	activities.
Encourages questioning, reflection, and	Focuses on practical skills and real-world
discovery.	application of concepts.

Integrating Both Approaches:

In practice, both the **Constructivist Approach** and the **Activity-Based Approach** can complement each other in the mathematics classroom. For instance:

- A teacher might introduce a mathematical concept using the **constructivist approach**, allowing students to discover the concept through guided exploration.
- Then, the teacher could follow up with an **activity-based approach**, where students engage in hands-on activities to apply the concept they've just learned.

By combining both approaches, teachers can create a more dynamic and engaging learning environment that encourages deeper understanding and greater retention of mathematical concepts.

Assessment in Mathematics

Section - IV

Pedagogy in Environmental Studies (EVS)

Pedagogy in Environmental Studies (EVS)

Concept and Significance of Environmental Studies (EVS)

(ପରିବେଶ ଅଧ୍ୟୟନର ସଙ୍ଗଠନ ଏବଂ ଗୁରୁତ୍ୱ)

Environmental Studies (EVS) is an interdisciplinary field of study that focuses on the environment and the interactions between human activities and the natural world. EVS covers a wide range of topics such as ecosystems, natural resources, pollution, climate change, and biodiversity, with an emphasis on building awareness, skills, and values to promote sustainable development and environmental conservation.

Concept of EVS:

- Interdisciplinary Nature: EVS integrates knowledge from Science, Social Science, and Humanities to understand environmental issues and the interrelationships between humans and the environment.
- Holistic Approach: It encourages the development of an integrated perspective where learners see the connections between various elements of the environment (e.g., water, air, land, animals, plants).
- **Practical Learning**: EVS is not only about bookish knowledge but also includes practical activities, field visits, and community-based learning to foster environmental awareness.

Significance of EVS:

- 1. **Environmental Awareness**: EVS helps children understand the importance of the environment, and the role they can play in its preservation.
- 2. **Sustainable Development**: Through EVS, students are taught about sustainable practices that contribute to environmental conservation for future generations.
- 3. **Holistic Development**: It contributes to the cognitive, emotional, and social development of children by addressing real-world problems and promoting critical thinking.
- 4. **Building Values**: EVS helps in inculcating values like **responsibility**, **respect for nature**, and **global citizenship**.
- 5. **Health and Safety**: Students learn the importance of a clean and healthy environment, which impacts their overall well-being.

Integration of Science and Social Science in Environmental Studies (EVS)

(ବିଜ୍ଞାନ ଏବଂ ସାମାଜିକ ବିଜ୍ଞାନର ସମ୍ମିଳନ ପରିବେଶ ଅଧ୍ୟୟନରେ)

Environmental Studies is a subject that effectively integrates **Science** and **Social Science** to provide a more comprehensive understanding of environmental issues. The integration ensures that students not only learn about the scientific aspects of the environment but also understand the **social**, **cultural**, **and economic factors** that influence environmental policies and practices. **Integration of Science in EVS**

Science in EVS deals with the **natural world**, **ecosystems**, and **biological processes**. It covers topics like:

- Ecology and Biodiversity: Understanding the interaction between living organisms and their environment.
- Natural Resources: Exploration of renewable and non-renewable resources such as water, air, minerals, forests, and energy sources.
- **Pollution**: Study of **air**, **water**, and **soil pollution**, and their impact on the environment and human health.
- Climate Change: Understanding the scientific aspects of global warming, greenhouse gases, and their effect on ecosystems and human societies.
- **Sustainability**: Exploring concepts of sustainable living, conservation, and practices to preserve the environment for future generations.

Integration of Social Science in EVS

Social Science in EVS focuses on **human activities** and their relationship with the environment. It provides insights into the **historical**, **cultural**, **economic**, and **political** dimensions of environmental issues. Topics include:

- **Human Impact on the Environment**: How industrialization, urbanization, and agricultural practices have altered the natural environment.
- Environmental Policies: Examination of government policies and international agreements on environmental protection (e.g., the Paris Agreement, Green Economy).
- **Sociocultural Perspectives**: Understanding how different communities and cultures perceive and interact with the environment.
- **Economic Aspects**: Exploring the economic implications of environmental degradation and the importance of sustainable development in economics.
- Environmental Justice: Investigating the role of social equity in environmental decisions, and how marginalized communities are often the most affected by environmental issues.

Benefits of Integrating Science and Social Science in EVS:

- 1. **Comprehensive Understanding**: It helps students develop a holistic understanding of environmental issues by linking the **scientific** and **social** perspectives.
- 2. **Critical Thinking**: Students are encouraged to think critically about the causes, consequences, and potential solutions to environmental problems from both scientific and social viewpoints.
- 3. **Real-world Relevance**: It makes learning more relevant by addressing real-world environmental challenges that require both scientific knowledge and social understanding to solve.
- Encouraging Action: Integration of Science and Social Science in EVS promotes actionoriented learning that encourages students to engage in environmental protection at local, national, and global levels.
- 5. **Informed Citizenship**: Students are better equipped to make informed decisions and contribute to **policy-making**, **advocacy**, and **community-based environmental programs**.

(ପରିବେଶ ଅଧ୍ୟୟନ ପାଠଦାନ ପ୍ରନାଳୀ)

Effective teaching of EVS requires a **student-centered**, **interactive**, and **multidisciplinary approach**. Here are some key approaches for teaching EVS:

- 1. Activity-based Learning: Hands-on activities such as nature walks, field trips, and group discussions to actively engage students in learning about their environment.
- 2. **Project-based Learning**: Encouraging students to work on environmental projects, like setting up a **garden**, conducting **surveys**, or creating **awareness campaigns**.
- 3. **Collaborative Learning**: Group work and peer discussions promote the exchange of ideas and deepen understanding of environmental concepts.
- 4. **Inquiry-based Learning**: Promoting **questions** and **explorations** in the classroom to stimulate curiosity and critical thinking about environmental issues.
- 5. **Use of Multimedia**: Utilizing **films**, **documentaries**, **digital resources**, and **interactive software** to enhance understanding and make environmental learning more engaging.

Aims and Objectives of Teaching and Learning Environmental Studies (EVS) Aims of Teaching and Learning EVS

(ପରିବେଶ ଅଧ୍ୟୟନ ପାଠଦାନ ଏବଂ ଶିକ୍ଷାର ଲକ୍ଷ୍ୟ)

The primary aim of teaching and learning Environmental Studies (EVS) is to create an awareness of the **environment**, its components, and the role of humans in preserving it. It is a goal-oriented approach that helps in developing responsible, environmentally-conscious citizens who understand the complexity of **environmental issues** and take steps toward **sustainable living**.

1. Environmental Awareness:

 To develop awareness among students about the environment, its resources, and the interdependence between humans and nature.

2. Promote Environmental Conservation:

 To encourage students to adopt sustainable practices and understand the importance of conserving natural resources like water, air, and biodiversity.

3. Foster Critical Thinking:

 To engage students in critical thinking about environmental problems, their causes, and potential solutions.

4. Instill Responsible Citizenship:

 To instill values of responsibility and accountability in students so they actively contribute to environmental protection and sustainable development.

5. Holistic Development:

 To foster cognitive, emotional, social, and practical development through interdisciplinary learning that connects the environment with Science, Social Science, and Humanities.

Objectives of Teaching and Learning EVS

(ପରିବେଶ ଅଧ୍ୟୟନ ପାଠଦାନ ଏବଂ ଶିକ୍ଷାର ଉଦ୍ଦେଶ୍ୟ)

The objectives are more specific and measurable actions that guide the teaching process of EVS. They reflect the skills, knowledge, and attitudes students are expected to develop by the end of the course.

1. Knowledge of the Environment:

- Students should be able to identify the components of the environment such as air, water, land, plants, and animals.
- Understand the interactions between these components and the importance of maintaining a balanced ecosystem.

2. Understanding of Environmental Issues:

- Students should recognize key environmental challenges such as pollution, climate change, deforestation, and biodiversity loss.
- Understand how human activities impact the environment and the importance of sustainable practices.

3. Development of Environmental Skills:

- Students should be able to analyze and evaluate environmental problems using scientific methods.
- They should be able to suggest solutions to environmental issues based on logical reasoning and evidence.

4. Promotion of Sustainable Practices:

- To encourage students to adopt daily habits that conserve resources (e.g., reducing waste, saving water, using energy efficiently).
- Teach students about renewable resources and sustainable development to ensure long-term environmental health.

5. Value Development:

- To develop a sense of respect for nature, empathy for living organisms, and a sense of social responsibility toward environmental conservation.
- Encourage students to reflect on their role as global citizens responsible for the wellbeing of the planet.

6. Practical Application:

- Students should be able to apply their knowledge to real-world situations, such as in community-based environmental projects or local conservation efforts.
- Encourage students to actively participate in eco-friendly activities like tree
 planting, waste management, and water conservation campaigns.

7. Scientific Inquiry and Exploration:

- Students should develop the ability to ask questions, conduct experiments, and seek answers related to environmental phenomena.
- Encourage the use of scientific tools like observation, data collection, and interpretation in studying environmental issues.

8. Civic Engagement and Advocacy:

- To encourage students to advocate for environmental protection and become agents of change in their communities.
- Develop their ability to participate in environmental decision-making processes and policies at local and global levels.