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OSSC LTR Syllabus 2024

The **Odisha Staff Selection Commission** (ଓଡିଶା ଷ୍ଟାଫ୍ ସିଲେକ୍ସନ୍ କମିଶନ୍) has invited **teachers** (ଶିକ୍ଷକ) to apply online through the official **website** (ଅଫିଶିଆଲ୍ ୱେବସାଇଟ୍) at **ossc.gov.in**. The officials aim to recruit a total of **6,025 eligible candidates** (6,025 ଯୋଗ୍ୟ ପ୍ରାର୍ଥୀ) for **Leave Training Reserve (LTR) Teachers** (ଲିଭ୍ ଟ୍ରେନିଙ୍ଗ୍ ରିଜର୍ଭ୍ ଶିକ୍ଷକ) in **Government Secondary Schools** (ସରକାରୀ ମଧ୍ୟମିକ ବିଦ୍ୟାଳୟ).

OSSC LTR Teacher Syllabus 2024

The syllabus consists of four **main subjects** (ମୁଖ୍ୟ ବିଷୟ): **Reasoning** (ତର୍କ ଶକ୍ତି), **Arithmetic** (ଗଣିତ), **Computer** (କମ୍ପ୍ୟୁଟର), and **General Knowledge** (ସାଧାରଣ ଜ୍ଞାନ). Candidates should thoroughly familiarize themselves with these subjects.

OSSC LTR Teacher Exam Pattern 2024

The exam is conducted in two stages:

1. **Preliminary** (ପ୍ରାରମ୍ଭିକ) – Online Mode
2. **Mains** (ମୁଖ୍ୟ) – Online Mode

Negative Marking (ନେଗେଟିଭ୍ ମାର୍କିଂ): There is a penalty of 0.25 marks for each incorrect answer.

OSSC LTR Prelims Exam Pattern 2024

Section (ଅଂଶ)	**Subjects (ବିଷୟ)**	**Marks (ମାର୍କ୍ସ)**	**Questions (ପ୍ରଶ୍ନ)**
General Studies (ସାଧାରଣ ଅଧ୍ୟୟନ)	Indian Constitution (ଭାରତୀୟ ସମ୍ବିଧାନ), Indian Economy (ଭାରତୀୟ ଅର୍ଥନୀତି), Indian and World Geography (ଭାରତୀୟ ଏବଂ ବିଶ୍ୱ ଭୂଗୋଳ), History of India (ଭାରତର ଇତିହାସ), History of Odisha (ଓଡ଼ିଶାର ଇତିହାସ), Environmental Issues (ପରିବେଶ ସମସ୍ୟା)	**30 Marks** (30 ମାର୍କ୍ସ)	**30 Questions** (30 ପ୍ରଶ୍ନ)
Arithmetic (ଗଣିତ)	–	**20 Marks** (20 ମାର୍କ୍ସ)	**20 Questions** (20 ପ୍ରଶ୍ନ)
Logical Reasoning & Mental Ability (ତର୍କ ଶକ୍ତି ଏବଂ ମାନସିକ ଶକ୍ତି)	–	**20 Marks** (20 ମାର୍କ୍ସ)	**20 Questions** (20 ପ୍ରଶ୍ନ)
Computer/Internet Awareness (କମ୍ପ୍ୟୁଟର/ଇଣ୍ଟରନେଟ ଜ୍ଞାନ)	–	**20 Marks** (20 ମାର୍କ୍ସ)	**20 Questions** (20 ପ୍ରଶ୍ନ)

Current Events (ଚାଲୁ ଘଟଣା)	–	**10 Marks** (10 ମାର୍କ୍ସ)	**10 Questions** (10 ପ୍ରଶ୍ନ)
Total (ମୋଟ)		**100 Marks** (100 ମାର୍କ୍ସ)	**100 Questions** (100 ପ୍ରଶ୍ନ)

OSSC LTR Teacher Exam Pattern 2024 Mains

Odisha LTR Teacher Mains exam is conducted for 150 marks except TGT Telugu Teacher post. Check the exam pattern for each post in the table below.

Post	Number of Questions	Total Marks	Subjects	Subject Marks	Languages (Medium)
TGT Science PCM	150	150	a) Physics	40	English
			b) Chemistry	40	
			c) Mathematics	50	
			d) Pedagogy & Evaluation	20	
TGT Science CBZ	150	150	a) Chemistry	40	English
			b) Botany	45	
			c) Zoology	45	
			d) Pedagogy & Evaluation	20	
TGT Arts	150	150	a) History + Political Science	20	English
			b) Geography + Economics	20	
			c) English	45	
			d) Pedagogy & Evaluation	20	
			e) Odia	45	Odia
Hindi Teacher	150	150	a) Hindi	–	Hindi
			b) Pedagogy & Evaluation	–	
Sanskrit Teacher	150	150	a) Sanskrit	–	Devanagari
			b) Pedagogy & Evaluation	–	
Telugu Teacher	100	100	a) Telugu	–	Telugu
			b) Pedagogy & Evaluation	–	

Physical Education Teacher	150	150	a) Physical Education	–	English & Odia
			b) Pedagogy & Evaluation	–	
Urdu Teacher	150	150	a) Urdu	–	Urdu
			b) Pedagogy & Evaluation	–	

OSSC LTR Syllabus 2024 Subject-wise

Arithmetic Syllabus (ଗଣିତ ସିଲାବସ୍)

1. **Number System** (ସଂଖ୍ୟା ପଦ୍ଧତି)
    - **Natural Numbers** (ସାଧାରଣ ସଂଖ୍ୟା)
    - **Integers** (ପୂର୍ଣ୍ଣ ସଂଖ୍ୟା)
    - **Fractions** (ଅଂଶ)
    - **Decimals** (ଦଶମିକ)
2. **Simplification** (ସରଳିକରଣ)
    - **BODMAS Rule** (ବିଓଡିଏମଏସ୍ ନିୟମ)
    - **Basic Algebraic Operations** (ମୂଳଭୂତ ବୀଜଗଣିତୀୟ ପ୍ରକ୍ରିୟା)
3. **Ratio and Proportion** (ଅନୁପାତ ଏବଂ ସମାନୁପାତ)
    - **Direct and Inverse Proportion** (ସାଧାରଣ ଏବଂ ବିପରୀତ ଅନୁପାତ)
    - **Problems on Ages** (ବୟସର ଉପରେ ଅଧାରିତ ସମସ୍ୟା)
4. **Percentage** (ଶତମାନ)
    - **Profit and Loss** (ଲାଭ ଏବଂ କ୍ଷତି)
    - **Discount** (ଅର୍ଦ୍ଧମୂଲ୍ୟ)
    - **Simple Interest** (ସରଳ ସୁଦ)
    - **Compound Interest** (ଚକ୍ରବୃଦ୍ଧି ସୁଦ)
5. **Time and Work** (ସମୟ ଏବଂ କାମ)
    - **Work Efficiency** (କାମକାରୀ ଶକ୍ତି)
    - **Pipes and Cisterns** (ପାଇପ ଏବଂ ଜଳାଶୟ)
6. **Time, Speed, and Distance** (ସମୟ, ଗତି, ଏବଂ ଦୂରତା)
    - **Average Speed** (ସାଧାରଣ ଗତି)
    - **Train Problems** (ରେଳ ମଧ୍ୟରେ ସମସ୍ୟା)
7. **Mensuration** (କ୍ଷେତ୍ରମାନ)

- **Area of Plane Figures** (ସମତଳ ଆକୃତିମାନର ଅଂକନ)
- **Surface Area and Volume** (ସତହ ଅଂକନ ଏବଂ ଆୟତନ)
  - **Circle** (ବୃତ୍ତ)
  - **Triangle** (ତ୍ରିଭୁଜ)
  - **Rectangle** (ଆୟତାକାର)
  - **Square** (ବର୍ଗ)
  - **Cuboid** (ଆୟତବଲକ)
  - **Cylinder** (ବଲୟ)

8. **Algebra** (ବୀଜଗଣିତ)
   - **Basic Algebraic Identities** (ମୂଳ ଆଲଜେବ୍ରା ପରିଚୟ)
   - **Linear Equations** (ସରଳ ସମୀକରଣ)
9. **Data Interpretation** (ତଥ୍ୟ ବିଶ୍ଳେଷଣ)
   - **Bar Graphs** (ସାଧାରଣ ଗ୍ରାଫ୍)
   - **Pie Charts** (ବର୍ତୁଳ ଚାର୍ଟ)
   - **Line Graphs** (ରେଖା ଗ୍ରାଫ୍)
10. **Average** (ସାଧାରଣ)
    - **Weighted Average** (ଓଜନିତ ସାଧାରଣ)

Reasoning Syllabus (ତର୍କ ଶକ୍ତି ସିଲାବସ୍)

1. **Analogies** (ସାଦୃଶ୍ୟ)
   - Identifying relationships between pairs of words or numbers.
   - **Verbal** (ଶାବ୍ଦିକ) and **Non-verbal** (ଅଶାବ୍ଦିକ) analogies.
2. **Classification** (ଶ୍ରେଣୀକରଣ)
   - Grouping similar items and finding the odd one out.
   - **Figures** (ଆକୃତି) and **Words** (ଶବ୍ଦ).
3. **Series** (ଶ୍ରେଣୀ)
   - **Number Series** (ସଂଖ୍ୟା ଶ୍ରେଣୀ)
   - **Alphabet Series** (ଅକ୍ଷର ଶ୍ରେଣୀ)
   - **Figure Series** (ଆକୃତି ଶ୍ରେଣୀ)
4. **Coding and Decoding** (କୋଡିଂ ଏବଂ ଡିକୋଡିଂ)
   - **Letter Coding** (ଅକ୍ଷର କୋଡିଂ)
   - **Number Coding** (ସଂଖ୍ୟା କୋଡିଂ)
   - **Symbol Coding** (ପ୍ରତୀକ କୋଡିଂ)

5. **Blood Relations** (ରକ୍ତ ସମ୍ପର୍କ)
    - Determining family relationships based on given information.
6. **Direction Sense Test** (ଦିଗ ଜ୍ଞାନ ପରୀକ୍ଷା)
    - Finding directions based on movement and orientation.
7. **Seating Arrangements** (ଆସନ ବ୍ୟବସ୍ଥା)
    - Arranging people in rows, circles, or other arrangements based on conditions.
8. **Puzzles** (ପାହେଲି)
    - Solving logical puzzles using clues and conditions.
    - **Tabulation** (ସାରଣୀକରଣ), **Seating Puzzles** (ଆସନ ଚିତ୍ର), etc.
9. **Syllogism** (ସିଲୋଜିଜମ୍)
    - Drawing conclusions based on given statements.
    - **Logical Deduction** (ତର୍କପୂର୍ଣ୍ଣ ନିଷ୍କର୍ଷ).
10. **Data Sufficiency** (ତଥ୍ୟ ପୂର୍ଣ୍ଣତା)
    - Analyzing if the given data is sufficient to answer a question.
11. **Logical Venn Diagrams** (ତର୍କପୂର୍ଣ୍ଣ ବେନ୍ ଚାର୍ଟ)
    - Solving problems based on sets and their relationships using Venn diagrams.
12. **Mathematical Operations** (ଗଣିତ ଅଭିଯାନ)
    - Performing operations like addition, subtraction, multiplication, and division with a logical approach.
13. **Decision Making** (ସିଦ୍ଧାନ୍ତ ନେବା)
    - Solving problems related to decision-making in hypothetical situations.
14. **Statement and Conclusion** (କଥନ ଏବଂ ନିଷ୍ପତ୍ତି)
    - Drawing inferences based on given statements.
15. **Statement and Assumptions** (କଥନ ଏବଂ ଧାରଣା)
    - Identifying assumptions made in given statements.
16. **Non-Verbal Reasoning** (ଅଶାବ୍ଦିକ ତର୍କ)
    - **Figure Completion** (ଆକୃତି ନିର୍ଣ୍ଣୟ)
    - **Mirror Images** (ଆଇନାର ଛବି)
    - **Paper Folding** (କାଗଜ ଭାଙ୍ଗିବା)

Computer/Internet Awareness Syllabus (କମ୍ପ୍ୟୁଟର/ଇଣ୍ଟରନେଟ ଜ୍ଞାନ ସିଲାବସ୍)

1. **Introduction to Computers** (କମ୍ପ୍ୟୁଟରର ପରିଚୟ)
    - **Basic Concepts** (ମୂଳ ଧାରଣା) of computers.
    - **History and Evolution** (ଇତିହାସ ଏବଂ ବିକାଶ) of computers.
    - **Types of Computers** (କମ୍ପ୍ୟୁଟରର ପ୍ରକାର).
2. **Computer Hardware** (କମ୍ପ୍ୟୁଟର ହାର୍ଡୱେର)

- **Input Devices** (ଇନପୁଟ୍ ଉପକରଣ): Keyboard (କୀବୋର୍ଡ), Mouse (ମାଉସ୍), Scanner (ସ୍କ୍ୟାନର), etc.
- **Output Devices** (ଆଉଟପୁଟ୍ ଉପକରଣ): Monitor (ମୋନିଟର), Printer (ପ୍ରିଣ୍ଟର), etc.
- **Central Processing Unit (CPU)** (ମୁଖ୍ୟ ପ୍ରସେସିଂ ଯନ୍ତ୍ର) and its components.
- **Memory** (ମେମୋରୀ): RAM (ର୍ୟାମ୍), ROM (ରୋମ୍), Cache (କ୍ୟାଚ୍), etc.
- **Storage Devices** (ସଂରକ୍ଷଣ ଉପକରଣ): Hard Disk (ହାର୍ଡ ଡିସ୍କ), CD/DVD (ସିଡି/ଡିଭିଡି), Pen Drive (ପେନ୍ ଡ୍ରାଇଭ୍), etc.

3. **Software** (ସଫ୍ଟୱେର)
   - **System Software** (ସିସ୍ଟମ୍ ସଫ୍ଟୱେର): Operating System (ଅପାରେଟିଂ ସିଷ୍ଟମ୍), Drivers (ଡ୍ରାଇଭର୍).
   - **Application Software** (ଆପ୍ଲିକେସନ୍ ସଫ୍ଟୱେର): Word Processing (ଶବ୍ଦ ପ୍ରସେସିଂ), Spreadsheets (ସ୍ପ୍ରେଡ୍ସିଟ୍), Presentation Tools (ପ୍ରସ୍ତୁତି ଟିଆରି ଯନ୍ତ୍ର), etc.
4. **Networking Concepts** (ନେଟୱର୍କିଂ ଧାରଣା)
   - **Types of Networks** (ନେଟୱର୍କର ପ୍ରକାର): LAN (ଲ୍ୟାନ୍), WAN (ୱାନ୍), MAN (ମ୍ୟାନ୍).
   - **Network Devices** (ନେଟୱର୍କ ଉପକରଣ): Router (ରାଉଟର୍), Switch (ସ୍ୱିଚ୍), Hub (ହବ୍).
   - **IP Addressing** (ଆଇପି ଠିକଣା).
   - **Protocols** (ନିୟମାବଳୀ): TCP/IP (ଟିସିପି/ଆଇପି), HTTP (ଏଚଟିଟିପି), FTP (ଏଫ୍ଟିପି).
5. **Internet Concepts** (ଇଣ୍ଟରନେଟ ଧାରଣା)
   - **Basics of Internet** (ଇଣ୍ଟରନେଟର ମୂଳ ଧାରଣା).
   - **Web Browsers** (ୱେବ୍ ବ୍ରାଉଜର୍): Chrome (କ୍ରୋମ୍), Firefox (ଫାୟାରଫକ୍ସ).
   - **Search Engines** (ସର୍ଚ୍ ଇଞ୍ଜିନ୍): Google (ଗୁଗଲ୍), Bing (ବିଂ).
   - **Email** (ଇମେଲ୍): Sending, receiving, and managing emails.
   - **Cloud Computing** (କ୍ଲାଉଡ୍ କମ୍ପ୍ୟୁଟିଂ) and its applications.
6. **Cyber Security** (ସାଇବର ସୁରକ୍ଷା)
   - **Virus and Malware** (ଭାଇରସ୍ ଏବଂ ମାଲୱେର): Types and Prevention.
   - **Firewalls** (ଅଗ୍ନି ଦ୍ୱାରି): Concept and Importance.
   - **Data Encryption** (ତଥ୍ୟ ଗୁପ୍ତୀକରଣ) and **Decryption** (ଗୁପ୍ତୀକରଣ ଖଣ୍ଡନ).
   - **Safe Browsing Practices** (ନିରାପଦ ବ୍ରାଉଜିଂ ପଦ୍ଧତି).
7. **Social Networking** (ସାମାଜିକ ନେଟୱର୍କିଂ)
   - **Introduction to Social Media** (ସାମାଜିକ ମାଧ୍ୟମର ପରିଚୟ): Facebook (ଫେସବୁକ୍), Twitter (ଟ୍ୱିଟର୍), Instagram (ଇନ୍ଷ୍ଟାଗ୍ରାମ).
   - **Benefits and Risks** (ଲାଭ ଏବଂ ବିପଦ) of using social networks.
8. **MS Office Applications** (ଏମଏସ୍ ଅଫିସ୍ ଆପ୍ଲିକେସନ୍)
   - **MS Word** (ଏମଏସ୍ ୱର୍ଡ): Document creation, formatting.
   - **MS Excel** (ଏମଏସ୍ ଏକ୍ସେଲ୍): Formulas, data management.
   - **MS PowerPoint** (ଏମଏସ୍ ପାୱାରପଏନ୍ଟ): Creating presentations.

General Knowledge and General Studies Syllabus (ସାଧାରଣ ଜ୍ଞାନ ଏବଂ ସାଧାରଣ ଅଧ୍ୟୟନ ସିଲାବସ୍)

1. **Current Affairs** (ଚାଲୁ ଘଟଣା)
    - **National** (ଜାତୀୟ) and **International Events** (ଆନ୍ତର୍ଜାତୀୟ ଘଟଣା).
    - **Current Events of Odisha** (ଓଡ଼ିଶାର ଚାଲୁ ଘଟଣା).
    - **Sports** (ଖେଳ) and **Awards** (ପୁରସ୍କାର).
    - **Books and Authors** (ପୁସ୍ତକ ଏବଂ ଲେଖକ).
    - **Important Days** (ମହତ୍ତ୍ୱପୂର୍ଣ୍ଣ ଦିନ) and **Themes** (ଥିମ୍).
2. **History of India and Odisha** (ଭାରତ ଏବଂ ଓଡ଼ିଶାର ଇତିହାସ)
    - **Indian Freedom Struggle** (ଭାରତୀୟ ସ୍ୱାଧୀନତା ସଂଗ୍ରାମ).
    - **Major Events in Indian History** (ଭାରତର ମୁଖ୍ୟ ଘଟଣାବଳୀ).
    - **Ancient, Medieval, and Modern History of India** (ପ୍ରାଚୀନ, ମଧ୍ୟ ଏବଂ ଆଧୁନିକ ଭାରତୀୟ ଇତିହାସ).
    - **History of Odisha** (ଓଡ଼ିଶାର ଇତିହାସ) – Key events, leaders, and cultural heritage.
3. **Geography of India and Odisha** (ଭାରତ ଏବଂ ଓଡ଼ିଶାର ଭୂଗୋଳ)
    - **Physical Geography** (ଭୌତିକ ଭୂଗୋଳ): Landforms, Rivers, Mountains.
    - **Indian Geography** (ଭାରତୀୟ ଭୂଗୋଳ): Climate, Soil, and Natural Resources.
    - **Geography of Odisha** (ଓଡ଼ିଶାର ଭୂଗୋଳ): Rivers (ନଦୀ), Forests (ବନ), Minerals (ଖଣିଜ ସମ୍ପଦ).
    - **Population Distribution** (ଜନସଂଖ୍ୟା ବିତରଣ), **Urbanization** (ନଗରାୟନ).
4. **Indian Polity** (ଭାରତୀୟ ରାଜନୀତି)
    - **Constitution of India** (ଭାରତୀୟ ସମ୍ବିଧାନ): Preamble (ଉଦ୍‌ବୋଧନ), Fundamental Rights (ମୂଳଭୂତ ଅଧିକାର), Directive Principles (ନିର୍ଦ୍ଦେଶକ ସିଦ୍ଧାନ୍ତ).
    - **Structure of Indian Government** (ଭାରତୀୟ ସରକାରର ଗଠନ): Legislature (ବିଧାନ), Executive (କାର୍ଯ୍ୟପାଳକ), Judiciary (ନ୍ୟାୟପାଳିକା).
    - **Parliament of India** (ଭାରତୀୟ ସଂସଦ).
    - **State Governments** (ରାଜ୍ୟ ସରକାର).
5. **Indian Economy** (ଭାରତୀୟ ଅର୍ଥନୀତି)
    - **Planning in India** (ଭାରତର ଯୋଜନାବଦ୍ଧନ): Five-Year Plans (ପଞ୍ଚବାର୍ଷିକ ଯୋଜନା).
    - **Agriculture** (କୃଷି), **Industry** (ଶିଳ୍ପ), and **Services Sector** (ସେବା କ୍ଷେତ୍ର).
    - **Economic Reforms** (ଅର୍ଥନୈତିକ ସୁଧାର): Liberalization (ଉଦାରୀକରଣ), Privatization (ବ୍ୟକ୍ତିଗତ କରଣ), Globalization (ବୈଶ୍ୱୀକରଣ).
    - **Current Economic Issues** (ଚାଲୁ ଅର୍ଥନୈତିକ ସମସ୍ୟା).
6. **Indian and World Geography** (ଭାରତୀୟ ଏବଂ ବିଶ୍ୱ ଭୂଗୋଳ)
    - **Continents and Countries** (ମହାଦେଶ ଏବଂ ଦେଶ).

- **Important Rivers** (ମହତ୍ତ୍ୱପୂର୍ଣ୍ଣ ନଦୀ), **Mountains** (ପର୍ବତ).
- **Climate Patterns** (ଜଳବାୟୁର ଢାଞ୍ଚା).
- **Geopolitical Significance** (ଭୌଗୋଳିକ ରାଜନୈତିକ ମହତ୍ତ୍ୱ).

7. **Environment and Climate Change** (ପରିବେଶ ଏବଂ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ)
   - **Biodiversity** (ଜୈବ ବିବିଧତା).
   - **Environmental Issues** (ପରିବେଶୀୟ ସମସ୍ୟା): Pollution (ଦୂଷଣ), Global Warming (ବିଶ୍ୱ ଉଷ୍ମାୟନ).
   - **Conservation Efforts** (ସଂରକ୍ଷଣ ପ୍ରଚେଷ୍ଟା): National Parks (ଜାତୀୟ ଉଦ୍ୟାନ), Wildlife Sanctuaries (ବନ୍ୟପ୍ରାଣୀ ଆଶ୍ରୟ).
8. **General Science** (ସାଧାରଣ ବିଜ୍ଞାନ)
   - **Physics** (ଭୌତିକବିଜ୍ଞାନ): Laws of Motion (ଗତିର ନିୟମ), Energy (ଶକ୍ତି), Sound (ଧ୍ୱନି).
   - **Chemistry** (ରସାୟନ): Acids (ଆମ୍ଳ), Bases (କ୍ଷାର), Metals (ଧାତୁ), Non-metals (ଅଧାତୁ).
   - **Biology** (ଜୀବବିଜ୍ଞାନ): Human Body (ମାନବ ଶରୀର), Plant and Animal Kingdom (ଉଦ୍ଭିଦ ଏବଂ ପ୍ରାଣୀ ଜଗତ).
   - **Scientific Discoveries** (ବିଜ୍ଞାନ ଆବିଷ୍କାର).

How To Prepare For Exam

1. Understand the Syllabus (ସିଲାବସ୍ କୁ ବୁଝନ୍ତୁ)

- Get a clear idea of the **OSSC LTR Syllabus** (ସିଲାବସ୍). Focus on important subjects like **Reasoning** (ରିଜନିଂ), **Arithmetic** (ଗଣିତ), **Computer Awareness** (କମ୍ପ୍ୟୁଟର ଜ୍ଞାନ), and **General Knowledge** (ସାଧାରଣ ଜ୍ଞାନ).
- Make a list of key topics in each subject.

2. Create a Study Plan (ଏକ ଅଧ୍ୟୟନ ଯୋଜନା ବନାନ୍ତୁ)

- Divide your study time for each section according to its weightage in the exam.
- Allocate more time to topics you find difficult and set weekly goals to cover portions of the syllabus.
- Keep time for **revision** (ପୁନଃଦେଖା) and **practice** (ଅଭ୍ୟାସ) tests.

3. Practice Mock Tests (ମକ୍ ଟେଷ୍ଟ ଅଭ୍ୟାସ କରନ୍ତୁ)

- Solve **previous year's question papers** (ପୂର୍ବର ଦିନର ପ୍ରଶ୍ନପତ୍ର).
- Regularly attempt **mock tests** (ମକ୍ ପରୀକ୍ଷା) to familiarize yourself with the exam pattern and time management.
- Analyze your performance and work on weak areas.

4. Focus on Key Subjects (ମୁଖ୍ୟ ବିଷୟ ଉପରେ ଧ୍ୟାନ ଦିଅନ୍ତୁ)

- **Reasoning** (ତର୍କଶକ୍ତି): Practice **puzzles** (ପହେଲି), **logical problems** (ତାର୍କିକ ସମସ୍ୟା) daily to improve your speed and accuracy.
- **Arithmetic** (ଗଣିତ): Focus on basic arithmetic operations like **percentages** (ପ୍ରତିଶତ), **ratios** (ଅନୁପାତ), and **simplifications** (ସହଜିକରଣ).

- **Computer Awareness** (କମ୍ପ୍ୟୁଟର ଜ୍ଞାନ): Understand basic concepts like **hardware** (ହାର୍ଡୱେର୍), **networking** (ନେଟୱର୍କିଂ), and **internet usage** (ଇଣ୍ଟରନେଟ ଉପଯୋଗ).
- **General Knowledge** (ସାଧାରଣ ଜ୍ଞାନ): Stay updated on **current affairs** (ଚାଲୁ ଘଟଣା), especially related to **Odisha** (ଓଡ଼ିଶା).

5. Time Management (ସମୟ ପରିଚାଳନା)

- During preparation, assign specific time slots for each subject.
- During the exam, don't spend too much time on a single question. Skip difficult ones and return to them later.

6. Strengthen Important Topics (ମହତ୍ତ୍ୱପୂର୍ଣ୍ଣ ବିଷୟ ବଳବାନ କରନ୍ତୁ)

- For **General Knowledge** (ସାଧାରଣ ଜ୍ଞାନ), focus on topics like **Indian History** (ଭାରତୀୟ ଇତିହାସ), **Geography** (ଭୂଗୋଳ), and **Current Affairs** (ଚାଲୁ ଘଟଣା).
- For **Reasoning** (ତର୍କଶକ୍ତି), practice **analytical ability** (ବିଶ୍ଳେଷଣାତ୍ମକ ଶକ୍ତି) questions daily.
- In **Arithmetic** (ଗଣିତ), work on your **mental calculations** (ମାନସିକ ଗଣନା) speed.

7. Revise Regularly (ନିୟମିତ ପୁନଃଦେଖା କରନ୍ତୁ)

- Set aside time for daily or weekly revision to keep important formulas, concepts, and facts fresh in your mind.
- Make short notes for quick revision before the exam.

8. Stay Updated with Current Affairs (ଚାଲୁ ଘଟଣା ସହିତ ସମ୍ପର୍କରେ ରୁହନ୍ତୁ)

- Read **newspapers** (ଖବରକାଗଜ), follow **news apps** (ଖବର ଆପ୍‌ଗୁଡ଼ିକ), and take notes on important events.

9. Stay Healthy and Relaxed (ସ୍ୱାସ୍ଥ୍ୟର ଯତ୍ନ ନିଅନ୍ତୁ)

- Take care of your **physical and mental health** (ଶାରୀରିକ ଏବଂ ମାନସିକ ସ୍ୱାସ୍ଥ୍ୟ).
- Get enough sleep and take short breaks during study sessions to stay focused.

Indian History

Fossils (ଅବଶେଷ) of early humans have been found in Africa from about 2.6 million years ago, but none have been found in India, suggesting that humans appeared in India later than in Africa.

- Recent discoveries from **Bori** (ବୋରି) in Maharashtra suggest humans appeared in India around 1.4 million years ago.
- The Earth's crust evolved in four stages. The fourth stage is divided into **Pleistocene** (ପ୍ଲେଇସ୍ଟୋସିନ୍) (most recent) and **Holocene** (ହୋଲୋସିନ୍) (present).
- Humans are believed to have appeared on Earth in the early **Pleistocene** period.
- Early humans in India used stone tools that were roughly made by chipping stones. This period is known as the **Stone Age** (ପାଥିବ ଯୁଗ), which is divided into:
    - **Palaeolithic** (ପୁରାତନ ପାଥିବ ଯୁଗ) or Old Stone Age
    - **Mesolithic** (ମଧ୍ୟ ପାଥିବ ଯୁଗ) or Middle Stone Age
    - **Neolithic** (ନୂତନ ପାଥିବ ଯୁଗ) or New Stone Age

Palaeolithic Age (ପୁରାତନ ପାଥିବ ଯୁଗ) (500000 BC - 9000 BC)

- The **Palaeolithic culture** (ପୁରାତନ ସଂସ୍କୃତି) in India developed during the **Pleistocene** period, also known as the Ice Age.
- It is believed that the **Palaeolithic people** (ପୁରାତନ ମାନବ) belonged to the **Negrito race** (ନେଗ୍ରିଟୋ ଜାତି).
- **Homo sapiens** (ହୋମୋ ସାପିଏନ୍ସ) first appeared towards the end of this phase.
- Palaeolithic people were hunters and gatherers, with no knowledge of agriculture, fire, or pottery. They used unpolished, rough stone tools and lived in caves or rock shelters. They are also known as **Quartzite men** (କ୍ୱାର୍ଟଜାଇଟ୍ ମାନବ).
- The Palaeolithic Age is divided into three phases based on the type of stone tools and climate changes:
    - **Early or Lower Palaeolithic** (ଆରମ୍ଭିକ କିମ୍ବା ନିମ୍ନ ପାଥିବ)
    - **Middle Palaeolithic** (ମଧ୍ୟ ପାଥିବ)
    - **Upper Palaeolithic** (ଉଚ୍ଚ ପାଥିବ)

Mesolithic Age (ମଧ୍ୟ ପାଥିବ ଯୁଗ) (9000 BC - 4000 BC)

- The **Mesolithic Age** (ମଧ୍ୟ ପାଥିବ ଯୁଗ) served as a transition between the **Palaeolithic** and **Neolithic** Ages.
- During this time, the climate became warmer and drier, leading to changes in flora and fauna, which allowed humans to move to new areas.
- **Mesolithic people** (ମଧ୍ୟ ପାଥିବ ମାନବ) continued hunting, fishing, and gathering food, but they also began domesticating animals.
- The typical tools of the Mesolithic Age are small stone tools called **microliths** (ମାଇକ୍ରୋଲିଥ୍), along with pointed blades, scrapers, etc.
- **Adamgarh** (ଆଡମଗଡ଼) in Madhya Pradesh and **Bagor** (ବାଗୋର୍) in Rajasthan provide early evidence of animal domestication.
- **Bhimbetka** (ଭୀମବେଟକା) in Madhya Pradesh is a famous site for prehistoric paintings from the Mesolithic Age.

Neolithic Age (ନୂତନ ପାଥିବ ଯୁଗ) (4000 BC - 1800 BC)

- The **Neolithic Age** (ନୂତନ ପାଥିବ ଯୁଗ) is characterized by the use of polished stone tools, especially stone axes.
- In **Burzahom** (ବୁର୍ଜାହୋମ୍), dogs were buried with their masters in graves.

- **Neolithic settlers** (ନୂତନ ପାଥିବ ବସିନ୍ଦା) were the earliest farming communities, growing crops like ragi and horse gram.
- Neolithic sites in the **Allahabad district** (ଆଲାହାବାଦ ଜିଲ୍ଲା) show rice cultivation from the sixth millennium BC. They also domesticated cattle, sheep, and goats.
- Neolithic people wove cotton and wool to make clothes and were the first to use handmade pottery and the potter's wheel.
- **Neolithic people** lived in caves, decorating the walls with scenes of hunting and dancing. They also knew how to make boats.
- **Koldihwa** (କୋଲଡିହ୍ୱା) in UP reveals three cultural phases: Neolithic, Chalcolithic, and Iron Age.
- **Mehargarh** (ମେହରଗଡ଼) in Baluchistan is the oldest Neolithic site in India, dating back to 7000 BC.
- Important Neolithic sites include the **Chhotanagpur region** (ଛୋଟାନାଗପୁର ଅଞ୍ଚଳ), **Central India** (ମଧ୍ୟଭାରତ), and areas south of the Krishna River.

Chalcolithic Culture (ଚାଲ୍କୋଲିଥିକ ସଂସ୍କୃତି) (1800 BC - 1000 BC)

- The **Neolithic period** (ନୂତନ ପାଥିବ ଯୁଗ) ended with the use of metals, with **copper** (ତାମ୍ବା) being the first metal used.
- The **Chalcolithic culture** (ଚାଲ୍କୋଲିଥିକ ସଂସ୍କୃତି) refers to the phase where both stone and copper tools were used.
- **Chalcolithic people** (ଚାଲ୍କୋଲିଥିକ ମାନବ) were mainly rural communities, domesticating animals and practicing agriculture.
- They lived in thatched houses and were unfamiliar with burnt bricks. They worshiped the **Mother Goddess** (ମାତୃ ଦେବୀ) and the **bull** (ବୃଷଭ).
- Chalcolithic people were the first to use painted pottery, with **black and red pottery** (କଳା ଏବଂ ଲାଲ୍ ମାଟିର ମାଣିକଠାଳୀ) painted with white line designs being the most popular.
- The **Malwa ware** (ମାଳବା ୱେର୍) is considered the richest among the Chalcolithic ceramics.
- Important Chalcolithic sites are found in **Rajasthan** (ରାଜସ୍ଥାନ), **Maharashtra** (ମହାରାଷ୍ଟ୍ର), **West Bengal** (ପଶ୍ଚିମ ବଙ୍ଗ), **Bihar** (ବିହାର), and **Madhya Pradesh** (ମଧ୍ୟ ପ୍ରଦେଶ).

Indus Valley Civilization (ସିନ୍ଧୁ ଘାଟୀ ସଭ୍ୟତା)

- **Indus Civilization** is one of the world's oldest civilizations, alongside those in Mesopotamia (Tigris and Euphrates), Egypt (Nile), and China (Hwang Ho).
- This civilization is part of India's **proto-history** and belongs to the **Bronze Age**.
- The most accepted period of the Indus Valley Civilization is **2500-1700 BC** (determined by **Carbon-14 dating**).
- It can be divided into three phases:
  - **Early Phase**: 2900-2500 BC
  - **Middle (Mature) Phase**: 2500-2000 BC
  - **Later Phase**: 2000-1750 BC

Discovery (ଆବିଷ୍କାର)

- **Dayaram Sahni** first discovered **Harappa** in 1921.
- **R.D. Banerjee** discovered **Mohenjodaro** or the **Mound of the Dead** in 1922.

Nomenclature of Indus Valley Civilization (ସିନ୍ଧୁ ଘାଟୀ ସଭ୍ୟତାର ନାମକରଣ)

- Named **Indus Valley Civilization** because it flourished along the **Indus River**.
- Also called **Harappan Civilization**, named by **John Marshall** after the first discovered site, Harappa.

- **Sudas (ସୁଦାସ)**, son of **Divodas (ଦିବୋଦାସ)**, and the **Bharata king (ଭାରତ ରାଜା)** from the Tritsu family, won against ten tribes (five Aryan and five non-Aryan).
- The war started because of a conflict between **Vashistha (ବଶିଷ୍ଠ)** (priest of Bharatas) and **Visvamitra (ବିଶ୍ୱାମିତ୍ର)** (priest of the alliance).

Economy (ଅର୍ଥନୀତି)

- **Aryans (ଆର୍ଯ୍ୟ)** had a mixed economy with both **agriculture (କୃଷି)** and **pastoralism (ପଶୁପାଳନ)**.
- They knew about **ploughshare (ହାଲ ଫଳା)**, mentioned in the Rig Veda, made of wood and drawn by oxen.
- Familiar with **sowing (ବିଆ ପତିଆ)**, **harvesting (କାଟଣ)**, **threshing (ମଡ଼ା ମଡ଼ା)**, and different **seasons (ଋତୁ)**.
- **Cow (ଗାଈ)** was central to their economy and **horse (ଘୋଡ଼ା)** was also important.
- **Cow** was the standard unit of exchange.
- **Gold coins (ସୁନା ମୁଦ୍ରା)** like **Nishka (ନିଷ୍କ)**, **Krishna (କୃଷ୍ଣ)**, and **Satmana (ସତ୍ମାନ)** were used.
- **Godhuli (ଗୋଧୂଳୀ)** was a time measurement, and **Gavyuti (ଗାଭ୍ୟୁତି)** measured distance.

Polity (ରାଜନୀତି)

- **King (ରାଜା)** was elected by the **tribal assembly (ଜାତୀୟ ସଭା)** called **Samiti (ସମିତି)**.
- Assemblies like **Sabha (ସଭା)**, **Vidatha (ବିଦାଥା)**, and **Gana (ଗଣ)** existed.
- **Samiti** was the National Assembly, and **Sabha** was the Council of Elders.
- The **Purohita (ପୁରୋହିତ)** was the most important advisor, followed by the **Senani (ସେନାନୀ)**, the army head.
- Voluntary offerings to the chief were called **Bali (ବଲି)**.
- No regular army, but groups of **infantry (ପଦାତି ସେନା)** and **charioteers (ରଥାବଳ)** were present.
- Weapons were made of **stone (ପଥର)**, **wood (କାଠ)**, **bone (ହାଡ଼)**, and **metal (ଧାତୁ)**.

Society (ସମାଜ)

- **Kinship (ଆତ୍ମୀୟତା)** was the foundation of society, with primary loyalty to the tribe (**Jana (ଜନ)**).
- **Vis (ବିଶ୍)** was another term for a tribe, and it was divided into **grama (ଗ୍ରାମ)**.
- **War (ଯୁଦ୍ଧ)** between **grama** was called **Sangrama (ସଂଗ୍ରାମ)**.
- **Family (କୁଳ)** was rarely mentioned, and society was **patriarchal (ପିତୃପତିକ)**.
- **Varna (ବର୍ଣ୍ଣ)** classified people based on **color (ରଙ୍ଗ)** into four groups: **Brahmins (ବ୍ରାହ୍ମଣ)**, **Kshatriyas (କ୍ଷତ୍ରିୟ)**, **Vaishyas (ବୈଶ୍ୟ)**, and **Sudras (ଶୂଦ୍ର)**.

Rigvedic Gods (ରିଗ୍ବେଦୀୟ ଦେବତାମାନେ)

- **Nature worship (ପ୍ରକୃତି ପୂଜା)** was common, with no temples or idols.
- **Yajnas (ଯଜ୍ଞ)** were performed in open spaces.
- **Soma (ସୋମ)** was the **God of plants (ଗଛ ପତ୍ତର ଦେବତା)**, and an intoxicating drink was named after him.
- The ninth **mandala (ମଣ୍ଡଳ)** of the Rig Veda is dedicated to **Soma**.
- Female deities like **Aditi (ଅଦିତି)** and **Usha (ଉଷା)** represented dawn.

Types of Deities (ଦେବତାମାନଙ୍କ ପ୍ରକାର)

God (ଦେବତା)	Associated Field (ସମ୍ପୃକ୍ତ କ୍ଷେତ୍ର)
Indra/Purandar (ଇନ୍ଦ୍ର/ପୁରନ୍ଦର)	Breaker of Forts (କୋଟ ଭାଙ୍ଗୁ ଥିବା)
Agni (ଅଗ୍ନି)	Fire God (ଅଗ୍ନି ଦେବତା)
Varuna (ବରୁଣ)	Water God (ଜଳ ଦେବତା)
Surya (ସୂର୍ଯ୍ୟ)	God with Seven horse chariot (ସତଘୋଡ଼ା ରଥର ଦେବତା)

Savitri (ସାବିତ୍ରୀ)	God of light (ଆଲୋକର ଦେବତା)
Mitra (ମିତ୍ର)	Solar God (ସୂର୍ଯ୍ୟ ଦେବତା)
Pushan (ପୁଷାନ୍)	God of marriage and roads (ବିବାହ ଓ ପଥର ଦେବତା)
Vishnu (ବିଷ୍ଣୁ)	One who covered Earth in Three steps (ତିନି ପାଦରେ ପୃଥିବୀ ଆବୃତ କରିଥିବା)
Rudra (ରୁଦ୍ର)	God of Animals (ପଶୁ ଦେବତା)
Dyaus (ଦ୍ୟାଉସ୍)	Eldest God and Father of the World (ପୃଥିବୀର ପ୍ରଥମ ଦେବତା ଓ ପିତା)
Ashwin (ଆଶ୍ୱିନ୍)	God of health, youth, and immortality (ସ୍ୱାସ୍ଥ୍ୟ, ଯୌବନ, ଅମରତାର ଦେବତା)
Sindhu (ସିନ୍ଧୁ)	River Goddess (ନଦୀ ଦେବୀ)
Yama (ଯମ)	God of death (ମୃତ୍ୟୁ ଦେବତା)
Marut (ମାରୁତ୍)	Storm God (ଝଡ଼ର ଦେବତା)

Types of Marriages (ବିବାହର ପ୍ରକାର)

- **Brahma (ବ୍ରହ୍ମ):** Marriage within the same class.
- **Daiva (ଦୈବ):** Daughter given to a priest.
- **Arsa (ଆର୍ଷ):** A cow given as a bride-price.
- **Prajapatya (ପ୍ରଜାପତ୍ୟ):** Marriage without dowry.
- **Gandharva (ଗାନ୍ଧର୍ବ):** Love marriage.
- **Asura (ଅସୁର):** Bride bought from the father.
- **Rakshasa (ରାକ୍ଷସ):** Marriage by capture.
- **Paishacha (ପୈଶାଚ):** Marriage by seduction.

Important Rituals (ମହତ୍ତ୍ୱପୂର୍ଣ୍ଣ ରିତୁଆଳ)

- **Rajasuya (ରାଜସୂୟ):** Strengthened the king's influence.
- **Asvamedha (ଅଶ୍ୱମେଧ):** Unquestioned control over territory.
- **Vajapeya (ବଜପେୟ):** Chariot race to prove supremacy.

Later Vedic Age (ପରବର୍ତ୍ତୀ ବେଦିକ ଯୁଗ) (1000-600 BC)

- **Rivers (ନଦୀ)** like **Narmada (ନର୍ମଦା)** and **Sadanira (ସାଦାନୀରା)** are mentioned.
- **Vindhya mountain (ବିନ୍ଧ୍ୟ ପର୍ବତ)** and territorial divisions of **India (ଭାରତ)** into **Aryavarta (ଆର୍ଯ୍ୟବର୍ତ୍ତ), Madhyadesa (ମଧ୍ୟଦେଶ)** and **Dakshinapatha (ଦକ୍ଷିଣାପଥ)**.
- Expansion towards **Eastern India (ପୂର୍ବ ଭାରତ)** indicated in legends.

Polity (ରାଜନୀତି) in Later Vedic Age

- Large kingdoms formed, and **Kingship (ରାଜତନ୍ତ୍ର)** became **hereditary (ବଂଶାନୁକ୍ରମୀ)**.
- **Assembly (ସଭା)** lost importance, and **Royal power (ରାଜସତା)** increased.
- **Vidhata (ବିଦାଥା)** disappeared, and **women (ମହିଳା)** were no longer allowed in assemblies.
- The term **Rashtra (ରାଷ୍ଟ୍ର)**, meaning territory, first appeared.
- **Taittariya Brahmana (ତୈତ୍ତିରୀୟ ବ୍ରାହ୍ମଣ)** mentions the divine origin of kingship.

Twelve Ratninas (Shatapatha Brahmana) (ଶତପଥ ବ୍ରାହ୍ମଣର ଦ୍ୱାଦଶ ରତ୍ନିନା)

- **Purohita (ପୁରୋହିତ)**: The Priest
- **Mahishi (ମହିଷୀ)**: Chief Queen
- **Yuvaraja (ଯୁବରାଜ)**: Crown Prince
- **Suta/Sarathi (ସୂତ/ସାରଥି)**: The Royal herald/the Charioteer
- **Bhagadugha (ଭାଗଦୁଘା)**: Tax collector
- **Akshavapa (ଅକ୍ଷବାପା)**: Accountant
- **Palagala (ପାଲାଗଲା)**: Friend of the king
- **Govikarta (ଗୋବିକର୍ତା)**: Head of the forest department
- **Senani (ସେନାନୀ)**: The General
- **Gramani (ଗ୍ରାମଣୀ)**: Head of the village
- **Kshatri (କ୍ଷତ୍ରି)**: Gateman/Chamberlain
- **Sangrahitri (ସଂଗ୍ରାହିତ୍ରୀ)**: Treasurer

Judiciary Development (ନ୍ୟାୟାଳୟ ବିକାଶ)

- Kings administered the criminal court.
- **Serious crimes (ଗୁରୁତର ଅପରାଧ)** included:
    - Killing an embryo

    - Homicide
    - Murder of a Brahmin
    - Stealing gold
    - Drinking sura (alcohol)
- Treason (ଦ୍ରୋହ) was considered a capital offense.

Society (ସମାଜ)

- Fourfold division (ଚାରିଭାଗ ଭାଗାବାନ୍ଧା) of society became clearer, starting with occupation and later becoming hereditary:
    - Brahmin (ବ୍ରାହ୍ମଣ): Gained power due to the growing cult of sacrifice.
    - Kshatriyas (କ୍ଷତ୍ରିୟ): The warrior class.
    - Vaisyas (ବୈଶ୍ୟ): Engaged in agriculture, cattle rearing, trading, artisan work, and metalworking.
    - Shudras (ଶୂଦ୍ର): Lowest in hierarchy, served the upper three varnas.
- Ashram system (ଆଶ୍ରମ ପ୍ରଣାଳୀ) was formed to achieve the four purusharthas (ପୁରୁଷାର୍ଥ): Dharma, Artha, Kama, and Moksha.
- The Jabala Upanishada (ଜାବାଲା ଉପନିଷଦ) gives the earliest reference to four ashramas: Brahmacharya, Grihastha, Vanaprastha, and Sanyasa.
- Position of women (ନାରୀଙ୍କ ସ୍ଥିତି) declined:
    - Aitareya Brahmana (ଆଇତରେୟ ବ୍ରାହ୍ମଣ) states that daughters are the source of misery while sons are protectors.
    - Maitrayani Samhita (ମୈତ୍ରାୟଣୀ ସଂହିତା) mentions three evils—liquor, women, and dice. Polygamy became common.
    - However, some women received higher education, as shown in the Yajnavalkya-Gargi dialogue (ୟାଜ୍ଞବଲ୍କ୍ୟ-ଗାର୍ଗୀ ସଂବାଦ) in the Vrihadarnyaka Upanishada (ବୃହଦାରଣ୍ୟକ ଉପନିଷଦ).
- Pratiloma vivah (ପ୍ରତିଲୋମ ବିବାହ) was not allowed.

Economy (ଆର୍ଥିକତା)

- Agriculture (କୃଷି) became the chief economic activity.
- Common crops were wheat, rice, barley, beans, and sesame.
- New occupational groups (ପେଶାଗୁଡ଼ିକ) like fishermen, washermen, dyers, doorkeepers, and footmen emerged.
- Tin, silver, and iron (ଟିନ୍, ଚାଁଦି, ଲୋହା) were known to people.
- Merchants organized into Guilds (ଗିଲ୍ଡ), referred to as Ganas (ଗଣ) and Sresthins (ଶ୍ରେଷ୍ଠିନ୍).

Religion (ଧର୍ମ)

- Rituals (କାର୍ଯ୍ୟାନୁଷ୍ଠାନ) became important in sacrifices.
- Prajapati (ପ୍ରଜାପତି) became the supreme God.
- Vishnu (ବିଷ୍ଣୁ) was seen as the preserver and protector.
- Pushan (ପୁଷାନ୍), the God responsible for the well-being of cattle, became the God of Shudras.
- Towards the end of the Vedic age (ବେଦିକ ଯୁଗ), a section of society began to resent the priestly domination.

The Vedic Literature (ବେଦିକ ସାହିତ୍ୟ)

- The word Veda (ବେଦ) comes from Vid (ବିଦ୍), meaning "to know" or "knowledge."
- Vedic texts (ବେଦିକ ପାଠ୍ୟପୁସ୍ତକ) are divided into:
    - Sruti (ଶ୍ରୁତି) (based on hearing)
    - Smriti (ସ୍ମୃତି) (based on memory)
- Vedas are divided into Samhitas (ସଂହିତା).

Rig Veda (ରିଗ ବେଦ)

- One of the oldest religious texts in the world.

- **Cattle Wealth**: Efforts to protect cattle.
- **Simple Life**: Desire for simplicity and understanding beyond Vedic Sanskrit.

Religious Environment (ଧାର୍ମିକ ପରିବେଶ)

- **6th Century BC**: Period of religious and intellectual revolution.
- **Major Sects**: **Jainism** and **Buddhism** were prominent.
- **Second Urbanisation**: Also known as the Age of the Buddha.

Jainism (ଜୈନ ଧର୍ମ)

- **Founder**: **Rishabhnath** (first Tirthankara) described as Narayana in Vishnu Purana.
- **Tirthankaras**: 24 in total.
    - **23rd**: **Parsavanath** (serpent symbol).
    - **24th**: **Vardhaman Mahavira** (lion symbol).

Life of Mahavira (ମହାବୀରଙ୍କ ଜୀବନ)

- **Birth**: 540 BC at Kundalgram, Bihar.
- **Family**: Married to **Yashoda**; daughter **Priyadarsena**.
- **Renunciation**: Became an ascetic at 30, joined and later left Parsavanath's order.
- **Enlightenment**: Achieved Kaivalya (perfect knowledge) at 42.
- **First Sermon**: Given at **Pava** to eleven disciples.
- **Death**: 468 BC at Pavapuri.

Teachings of Mahavira (ମହାବୀରଙ୍କ ଶିକ୍ଷା)

- **Rejection**: Of Vedic authority and existence of God.
- **Beliefs**:
    - Every object has a soul.
    - Strict non-violence.
    - Salvation through penance and fasting.
    - Universal brotherhood and equality.
    - Belief in karma and soul transmigration.

Jaina Philosophy (ଜୈନ ଦାର୍ଶନ)

- **Syadavada**: All judgments are relative and conditional.
- **Anekantavada**: Doctrine of the mayness of reality.
- **Three Ratnas**:
    - Right Faith (**Samyak Vishwas**).
    - Right Knowledge (**Samyak Jnan**).
    - Right Conduct (**Samyak Karma**).
- **Five Cardinal Principles**:
    - **Non-injury** (Ahimsa).
    - **Non-lying** (Satya).
    - **Non-stealing** (Asteya).
    - **Non-possession** (Aparigraha).
    - **Celibacy** (Brahmacharya).
- **Mahavratas**: Monks observing these principles.
- **Anuvratas**: Lay followers observing these principles.

Five Instruments of Knowledge (ପାଞ୍ଚ ଜ୍ଞାନ ଉପକରଣ)

- **Mati Jnana**: Perception through sense organs.
- **Avadhi Jnana**: Clairvoyant perception.
- **Shruta Jnana**: Knowledge from scriptures.
- **Manahparyaya Jnana**: Telepathic knowledge.
- **Keval Jnana**: Omniscience.

Sects of Jainism (ଜୈନ ସମ୍ପ୍ରଦାୟ)

- **Schism**: Occurred due to migration; split into **Digambaras** (led by Bhadrabahu) and **Svetambaras** (led by Sthulabhadra).

Jain Church (ଜୈନ ଚର୍ଚ୍ଚ)

- **Arya Sudharman**: Successor of Mahavira.
- **Successors**: Jambu, Sambhutavijaya, and Bhadrabahu.

Spread of Jainism (ଜୈନ ଧର୍ମର ବିସ୍ତାର)

- **Regions**:

    - **Gujarat and Rajasthan**: Svetambara sect.
    - **Mysore**: Digambara sect.

Importance of Jainism (ଜୈନ ଧର୍ମର ଗୁରୁତ୍ୱ)

- **Languages**: Led to the growth of regional languages like Marathi, Gujarati, Rajasthani, and Kannada.

Causes Behind the Decline of Jainism (ଜୈନ ଧର୍ମର ପତନର କାରଣ)

- **Extreme Practices**: Strict observance of ahimsa and penance.
- **Lack of Patronage**: No support from later kings.
- **Limited Efforts**: No significant efforts to spread the religion.

Jaina Councils (ଜୈନ ସଭାଗୁଡିକ)

- **First Jaina Council**:
    - **Year**: 300 BC
    - **Venue**: Pataliputra
    - **Chairman**: Sthulabhadra
    - **Developments**: Compilation of 12 Angas to replace 14 Purvas.
- **Second Jaina Council**:
    - **Year**: AD 512
    - **Venue**: Vallabhi
    - **Chairman**: Devridhigani Kshmasramana
    - **Developments**: Final compilation of 12 Angas and 12 Upangas.

Buddhism (ବୁଦ୍ଧିଜିବି)

Founded by Gautama Buddha (ଗୌତମ ବୁଦ୍ଧ)

- Born as **Siddhartha** (ସିଦ୍ଧାର୍ଥ) in **563 BC** at **Lumbini** (ଲୁମ୍ବିନୀ).
- Father: **Suddhodhana** (ସୁଦ୍ଧୋଧନ)
- Mother: **Mahamaya** (ମହାମାୟା), died 7 days after birth.
- Raised by stepmother **Gautami** (ଗାଉତାମୀ).
- Married **Yashodhara** (ୟଶୋଧରା) at 16, had a son **Rahul** (ରାହୁଲ).
- **Great Renunciation** (ମହାବିନିଶ୍କ୍ରମଣ) at 29 after seeing old age, sickness, death, and an ascetic.
- **Nirvana** or **Enlightenment** (ନିର୍ବାଣ) at 35 under the **Bodhi Tree** (ବୋଧି ବୃକ୍ଷ) in **Bodh Gaya** (ବୋଧ ଗୟା).
- **First Sermon** (ପ୍ରଥମ ସଂବାଦ) at **Sarnath** (ସାରନାଥ) with his five disciples.
- **Death** (ମହାପରିନିର୍ବାଣ) at 80 in **Kusinagar** (କୁସିନଗର).

Major Events of Buddha's Life

- **Birth** (ଜନ୍ମ): Lotus and Bull
- **Renunciation** (ମହାବିନିଶ୍କ୍ରମଣ): Horse
- **Enlightenment** (ନିର୍ବାଣ): Bodhi Tree
- **First Sermon** (ପ୍ରଥମ ସଂବାଦ): Wheel
- **Death** (ମହାପରିନିର୍ବାଣ): Stupa

Teachings of Buddha

- **Four Noble Truths** (ଚାରି ଆର୍ଯ୍ୟ ସତ୍ୟ):
    1. **The world is full of sorrows** (ସବ୍ବମ୍ ଦୁଃଖମ୍).
    2. **Cause of sorrow is desire** (ଦ୍ୱାଦଶ ନିଦାନ).
    3. **Desires can be conquered** (ନିର୍ବାଣ).
    4. **Achieved by following the Eight-Fold Path** (ଆଷ୍ଟାଙ୍ଗିକ ମାର୍ଗ).
- **Eight-Fold Path** (ଆଷ୍ଟାଙ୍ଗିକ ମାର୍ଗ):
    - Right understanding
    - Right thought
    - Right speech
    - Right action
    - Right means of livelihood
    - Right effort
    - Right mindfulness
    - Right concentration
- **Three Jewels** (ତିନି ରତ୍ନ):
    - **Buddha** (ବୁଦ୍ଧ)

(ସୁପ୍ରିମ କୋର୍ଟ) if the High Court (ହାଇ କୋର୍ଟ):

- Has withdrawn for trial before itself any case from any subordinate and has in such trial convicted the accused and sentenced him to death (ମୃତ୍ୟୁ).
- Certifies that the case is fit for appeal to the Supreme Court (ସୁପ୍ରିମ କୋର୍ଟ).

Advisory Jurisdiction (ସଳହା ନ୍ୟାୟାଧିକାର)

- If the President (ରାଷ୍ଟ୍ରପତି) seeks advice from the Supreme Court (ସୁପ୍ରିମ କୋର୍ଟ)

Important Term of Computer

Adobe Acrobat Reader

Adobe Acrobat Reader (ଏଡୋବି ଏକ୍ରୋବେଟ୍ ରିଡର୍) is software that allows you to view **PDF documents** (ପିଡିଏଫ୍ ଡକ୍ୟୁମେଣ୍ଟ), which can be seen but not changed. It can be downloaded free of charge from Adobe.

ADSL

ADSL (Asymmetric Digital Subscriber Line) (ଏଡିଏସଏଲ୍) is a type of **digital subscriber line** (DSL) (ଡିଜିଟାଲ୍ ସବ୍ସ୍କ୍ରାଇବର୍ ଲାଇନ୍) broadband technology used to connect to the Internet. It uses standard telephone lines to deliver high-speed data communications, reaching speeds of up to **24 megabytes per second** (ମେଗାବାଇଟ୍).

Analogue

Analogue (ଆନାଲଗ୍) refers to a conventional method of transmitting data. Standard landline telephones use analogue technology, which is distinct from **digital technology** (ଡିଜିଟାଲ୍ ପ୍ରଯୁକ୍ତି) that offers greater quality and speed of data transmission.

Assistive Technology

Assistive technology (ସହାୟକ ପ୍ରଯୁକ୍ତି) refers to any software or hardware that assists and improves the functional capabilities of people with disabilities. Examples include **wheelchairs** (ଚକ୍ରାଧାରୀ), **prosthetics** (ପ୍ରୋଥେସିସ), **voice-to-text technology** (ମୌଳିକ ସ୍ୱର ପାଇଁ ଟେକ୍ନୋଲୋଜି), and **text-to-speech technology** (ଲେଖାକୁ ସ୍ୱର ମାଧ୍ୟମରେ ଦେଖାବା ପ୍ରଯୁକ୍ତି).

Attachment

An **attachment** (ଅଟ୍ୟାଚ୍ମେଣ୍ଟ) is a document sent with an email message. Many types of files can be sent this way (e.g., **Word documents** (ୱର୍ଡ ଡକ୍ୟୁମେଣ୍ଟସ), **PDFs** (ପିଡିଏଫ୍), **Excel files** (ଏକ୍ସେଲ୍ ଫାଇଲ୍), **JPEGs** (ଜେପିଇଜିସ୍)). Be wary of attaching large files, as they can take considerable time for the recipient to download. It's good practice to **compress** (ସଂକୋଚନ) large files using software like **WinZip** (ୱିନଜିପ୍) before attaching.

Back-end

The **back-end** (ବ୍ୟାକ୍-ଏଣ୍ଡ) refers to the part of an application that performs essential tasks that are not apparent to the user.

Backward Compatible

If software is **backward compatible** (ପୂର୍ବ ସଂସ୍କରଣ ସହ ସାଥୀ), it means it can work with earlier versions of the same software. For example, **Microsoft Word 2010** can read files created in the **2003 version** of the same program.

Bandwidth

Bandwidth (ବ୍ୟାଣ୍ଡୱିଡ୍ଥ୍) refers to the maximum amount of data that can travel a communication path in a given time, usually measured in seconds.

Bit

A **bit** (ବିଟ୍), short for **binary digit** (ବାଇନାରୀ ଡିଜିଟ୍), is the smallest unit of measurement in computing. **8 bits** make up **1 byte** (ବାଇଟ୍).

Bluetooth

Bluetooth (ବ୍ଲୁଟୁଥ୍) is a wireless communication technology designed to replace cables. It allows short-range connections between Bluetooth-compatible devices, such as **mobile phones** (ମୋବାଇଲ୍ ଫୋନ୍), **tablets** (ଟେବଲେଟ୍), **headsets** (ହେଡ୍ସେଟ୍), or **medical equipment** (ମେଡିକାଲ୍ ଉପକରଣ).

Bookmark

A **bookmark** (ବୁକମାର୍କ) is a saved link to a particular web page. In **Microsoft Internet Explorer** (ମାଇକ୍ରୋସଫ୍ଟ ଇଣ୍ଟରନେଟ୍ ଇକ୍ସ୍ପ୍ଲୋରର୍), bookmarks are referred to as "favourites."

Boolean Operators

Most search engines (e.g., **Google** (ଗୁଗୁଲ୍)) allow you to limit or refine your search using words like "and," "or," and "not." These are known as **boolean operators** (ବୁଲିୟନ୍ ଓପେରେଟର୍) due to their origin in logic.

Boot (Re-boot)

To **boot** (or **re-boot**) (ବୁଟ୍) means to load and initialize the operating system on a computer. Think of it as starting up your computer. In Windows, you can use the key combination **CTRL + ALT + DEL** for a "soft" boot, meaning restarting the computer without turning it completely off.

Bounce Back

An email message that cannot be delivered and returns an error notification to the sender is said to "bounce back." If you receive such an error notification, check that you have typed the address correctly.

Broadband

Broadband (ବ୍ରଡ୍ବ୍ୟାଣ୍ଡ) is a type of communications technology that allows a single wire to carry multiple types of signals simultaneously, such as audio and video. **Cable TV** (କେବଲ୍ ଟିଭି) is one example of broadband data transmission.

Browser

A **browser** (ବ୍ରାଉଜର୍) is a software program that allows you to surf the web. Popular web browsers include **Google Chrome** (ଗୁଗୁଲ୍ କ୍ରୋମ୍), **Mozilla Firefox** (ମୋଜିଲା ଫାୟାରଫୋକ୍ସ), **Microsoft Edge** (ମାଇକ୍ରୋସଫ୍ଟ ଏଜ୍), and **Internet Explorer** (ଇଣ୍ଟରନେଟ୍ ଇକ୍ସ୍ପ୍ଲୋରର୍).

Cache

When you download a web page, the data is **cached** (କ୍ୟାସ୍), meaning it is temporarily stored on your computer. The next time you want that page, your browser accesses it from the cache for faster loading. If the cached web page is frequently updated, you might miss the latest version. If you suspect the page isn't up-to-date, use the "refresh" button on your browser.

CAD

Computer-Aided Design (CAD) (କମ୍ପ୍ୟୁଟର୍-ଏଡେଡ୍ ଡିଜାଇନ୍) is software that allows users to create **2D and 3D designs** (ଦୁଇ ମାତ୍ରିକ ଏବଂ ତିନି ମାତ୍ରିକ ଡିଜାଇନ୍). CAD is used by architects, engineers, artists, and other professionals to create precise technical drawings.

Chip

A **chip** (ଚିପ୍) is a **microprocessor** (ମାଇକ୍ରୋପ୍ରୋସେସର୍) that performs many functions and calculations to make your computer run. Your computer's chip is also referred to as the **CPU** (Central Processing Unit) (ମଧ୍ୟମ ପ୍ରୋସେସିଙ୍ଗ୍ ଏକକ) or the **processor** (ପ୍ରୋସେସର୍).

Content

Content (କନ୍ଟେଣ୍ଟ) refers to the text and information on a website, as opposed to its design and structure.

Cookie

A **cookie** (କୁକି) is a piece of code or data created by a web server and stored on a user's computer. It is used to track the user's usage patterns and preferences.

CPU

The **central processing unit (CPU)** (ସେଣ୍ଟ୍ରାଲ୍ ପ୍ରୋସେସିଙ୍ଗ୍ ଏକକ) is the brain of your computer. It is responsible for performing calculations and tasks that make programs work. The higher the speed of a CPU, the faster it undertakes calculations and tasks.

Cybercrime

Cybercrime (ସାଇବର୍ କ୍ରାଇମ୍) refers to any illegal activity undertaken (or heavily reliant on) a computer. Examples include network intrusions, identity theft, and the spreading of computer viruses.

Cybersecurity

Cybersecurity (ସାଇବର୍ ସେକ୍ୟୁରିଟି) encompasses measures designed to protect your computer, device, or network from cybercrime, preventing unauthorized access, changes, and damage.

Device Driver

A **device driver** (ଡିଭାଇସ୍ ଡ୍ରାଇଭର୍) is a small program that allows peripheral devices, such as printers or scanners, to connect to your PC.

Domain

A **domain** (ଡୋମେନ୍) is a set of computers on a network that are managed as a unit.

Download

of the modern era. The **Greek** (ଗ୍ରୀକ) **Antikythera System** was developed to make astronomical and mathematical figures accurate.

Pascaline - 1642

- The **Pascaline** (ପାସ୍କାଲିନ) was built after the **Abacus** (ଅବାକସ). It was calculated by the mathematical expert **Blaise Pascal** (ବ୍ଲାଇଜ୍ ପାସ୍କାଲ) in 1642, at a higher speed than the **Abacus** (ଅବାକସ).
- This was the first mechanical **calculator** (ଗଣନା କର୍ତ୍ତା). This machine was called an **adding machine** (ଯୋଗ କରିବା ଯନ୍ତ୍ର), and it is also referred to as the **Pascaline** (ପାସ୍କାଲିନ).

Difference Engine - 1822

- The **Difference Engine** (ଭିନ୍ନ ଯନ୍ତ୍ର) was a machine made by **Sir Charles Babbage** (ସାର୍ ଚାର୍ଲସ ବ୍ୟାବେଜ) that could accurately calculate.
- It was invented in 1822, in which **punch cards** (ପଞ୍ଚିକା କାର୍ଡ) were used for program storage.
- It used steam, on the basis of which today's **computers** (କମ୍ପ୍ୟୁଟର) are being created. Therefore, **Charles Babbage** (ଚାର୍ଲସ ବ୍ୟାବେଜ) is called the father of the **computer** (କମ୍ପ୍ୟୁଟର).

Zuse Z - 3 - 1941

- The great scientist **Conrad Zuse** (କନ୍ରାଡ୍ ଜୁଜ) invented a phenomenon called **Zuse-Z3** (ଜୁଜ-Z3), which was the first electronic **computer** (କମ୍ପ୍ୟୁଟର) based on **binary arithmetic** (ବାଇନେରୀ ଗଣନା) and **floating-point arithmetic** (ଫ୍ଲୋଟିଙ୍ଗ ପଏଣ୍ଟ ଗଣନା).

UNIVAC - 1946

- A U.S. Military Research Room created the **ENIAC** (ଇଏନଆଇଏସି) machine, which means **Electronic Numerical Integrator and Computer** (ଇଲେକ୍ଟ୍ରନିକ ନ୍ୟୁମେରିକାଲ ଇଣ୍ଟେଗ୍ରେଟର ଏଣ୍ଡ କମ୍ପ୍ୟୁଟର).
- **ENIAC** (ଇଏନଆଇଏସି) worked on the **decimal arithmetic system** (ଦଶମ ଗଣନା ପ୍ରଣାଳୀ) and later became known as the first **computer** (କମ୍ପ୍ୟୁଟର), which later developed into a modern **computer** (କମ୍ପ୍ୟୁଟର).

Manchester Small Scale Machine (SSEM) - 1948

- The **SSEM** (ସ୍ମଲ୍ ସ୍କେଲ୍ ମେସିନ୍) was the first **computer** (କମ୍ପ୍ୟୁଟର) that could keep any of the **programs** (କାର୍ଯ୍ୟକ୍ରମ) safe in the **vacuum tube** (ଭାକ୍ୟୁମ୍ ଟ୍ୟୁବ).
- It was nicknamed **Baby** (ବେବୀ) and was made by **Frederick Williams** (ଫ୍ରେଡେରିକ୍ ୱିଲିୟମ୍ସ) and **Tom Kilburn** (ଟମ୍ କିଲ୍ବର୍ନ).

FEATURES OF A COMPUTER

Speed:

- It has a very **high speed** (ଉଚ୍ଚ ଗତି) of executing **instructions** (ନିର୍ଦ୍ଦେଶ).
- The **CPU** (ସିପିୟୁ) of a **computer** (କମ୍ପ୍ୟୁଟର) can perform more than **10 million operations** (ଦଶ ମିଲିୟନ୍ ଓପରେସନ) per second.
- All the **instructions** (ନିର୍ଦ୍ଦେଶ) are executed in accordance with a **clock** (କ୍ଲକ୍), whose frequency is measured in **MHz** (ମେଗାହର୍ଜ).
- Normally, **3-4 cycles** (3-4 ସାଇକ୍ଲ) of this **clock** (କ୍ଲକ୍) are required to execute one **instruction** (ନିର୍ଦ୍ଦେଶ).
- Recent **computers** (କମ୍ପ୍ୟୁଟର) have a speed of about **300 MHz**, i.e., one cycle of approximately **3 x 10^-9 Sec**. This means that it can execute an **instruction** (ନିର୍ଦ୍ଦେଶ) in about **10 nanoseconds** (10 ନାନୋ ସେକେଣ୍ଡ).
- In other words, it can execute **100 million instructions** (100 ମିଲିୟନ୍ ନିର୍ଦ୍ଦେଶ) in one second. However, the overall speed of performance of a **computer** (କମ୍ପ୍ୟୁଟର) decreases due to slower **input** (ଇନପୁଟ) and **output devices** (ଔଟପୁଟ ଯନ୍ତ୍ର), interfaced to the **CPU** (ସିପିୟୁ).

Storage:

- The speed with which **computers** (କମ୍ପ୍ୟୁଟର) can process large quantities of **data** (ତଥ୍ୟ) and

information (ସୂଚନା) is quite high, and the size of input and output is also large.

- The size of **information** (ସୂଚନା) to be stored further increases due to **graphic applications** (ଗ୍ରାଫିକ୍ ଆବେଦନ).
- All this **information** (ସୂଚନା) is to be stored in **auxiliary memory** (ସହାୟକ ମେମୋରୀ), i.e., **Hard Disk** (ହାର୍ଡ ଡିସ୍କ) fitted inside the **computer** (କମ୍ପ୍ୟୁଟର).
- **Hard Disks** (ହାର୍ଡ ଡିସ୍କ) nowadays have a storage capacity as large as **4 GB** (ଗିଗାବାଇଟ୍).
- The size of **internal primary memory** (ଆଧାରିକ ପ୍ରାଥମିକ ସ୍ମୃତି) (RAM) has also increased a lot to about **64 MB** (ମେଗାବାଇଟ୍).

Accuracy:

- The **accuracy** (ସଠିକତା) of results computed by a **computer** (କମ୍ପ୍ୟୁଟର) is consistently high.
- Due to **digital techniques** (ଡିଜିଟାଲ୍ ପ୍ରଣାଳୀ), the error is very small.
- The errors in **computing** (ଗଣନା) may be due to logical mistakes by a **programmer** (କାର୍ଯ୍ୟକ୍ରମକାର) or due to inaccurate **data** (ତଥ୍ୟ).

Reliability:

- The **reliability** (ଭରସା) of results processed by a **computer** (କମ୍ପ୍ୟୁଟର) is very high.
- If a **program** (କାର୍ଯ୍ୟକ୍ରମ) is executed any number of times with the same set of **data** (ତଥ୍ୟ), every time the results would be the same.

Versatility:

- **Computers** (କମ୍ପ୍ୟୁଟର) are capable of performing almost any task provided the task can be reduced to a series of logical steps so that an appropriate **program** (କାର୍ଯ୍ୟକ୍ରମ) in a suitable language can be fed to **computer memory** (କମ୍ପ୍ୟୁଟର ମେମୋରୀ).
- Of course, the **input** (ଇନପୁଟ) and **output devices** (ଔଟପୁଟ ଯନ୍ତ୍ର) should be capable of performing the desired task.
- Because of these capabilities, a number of processes can be automated with the help of a **computer** (କମ୍ପ୍ୟୁଟର).

Quick Decision:

- Analyzing **computer** (କମ୍ପ୍ୟୁଟର) situations with the ability to make fast decisions based on the instructions given earlier.

Agility:

- Due to the **computer** (କମ୍ପ୍ୟୁଟର) being a machine, it is devoid of human flaws. It does not feel tired or bored and works with equal power every time.

Permanent Storage:

- The **memory** (ମେମୋରୀ) used in the **computer** (କମ୍ପ୍ୟୁଟର) is used for permanent storage of **data** (ତଥ୍ୟ), **information** (ସୂଚନା), and **instructions** (ନିର୍ଦ୍ଦେଶ).
- Since the **information** (ସୂଚନା) in the **computer** (କମ୍ପ୍ୟୁଟର) is stored electronically, the possibility of losing the **information** (ସୂଚନା) is less.

Limitations of Computer:

Computer characteristics indicate that the **computer** (କମ୍ପ୍ୟୁଟର) performs many tasks for you, but there are some limitations that prevent it from functioning beyond certain boundaries. Let's know what the limitations of the **computer** (କମ୍ପ୍ୟୁଟର) are:

Lack of Intelligence:

- The **computer** (କମ୍ପ୍ୟୁଟର) is a machine.
- It does not have **intelligence** (ବୁଦ୍ଧି) like humans; it only follows the **instructions** (ନିର୍ଦ୍ଦେଶ) given by the user. In any case, the **computer** (କମ୍ପ୍ୟୁଟର) performs less work than the given **instructions** (ନିର୍ଦ୍ଦେଶ).

Lack of Common Sense:

- It is important to know that the **computer** (କମ୍ପ୍ୟୁଟର) never makes any mistakes, but if the user inputs the wrong information, then it does not have a general sense, i.e., **common sense** (ସାଧାରଣ ବୁଦ୍ଧି). For example, if you input "The limit is a girl," it will consider it by default as a boy. It does not distinguish between right and wrong.

Dependence on Electricity:

- The **computer** (କମ୍ପ୍ୟୁଟର) requires electricity (ବିଦ୍ୟୁତ) to work. Without electricity, the

- **Input** is done using devices like **keyboard** (କୀବୋର୍ଡ) and **mouse** (ମାଉସ୍) to enter data or commands.
- In the **processing** phase, the data is processed by the **processor** based on the information and instructions in the software.
- Finally, in the **output** phase, the processed information is delivered through output devices.

Parts of CPU and Their Functions

Internal CPU

- The **CPU** is the main component of the computer and consists of various hardware parts.
- The performance of the CPU depends on the quality of these parts.

Hard Disk

- The **hard disk** (ହାର୍ଡ୍ ଡ୍ରାଇଭ୍) stores all computer programs and data securely.
- Its memory is **permanent** (ଚୁକ୍ତି), preserving data even after the computer is turned off.
- Storage capacity has evolved from **megabytes** (MB) to **terabytes** (TB), with modern PCs commonly having **500 GB** or **1 TB**.

Motherboard

- The **motherboard** (ମଦର୍ବୋର୍ଡ) is a flat platform made of fiberglass that connects all computer hardware components.
- It connects to the **processor**, **hard disk**, **RAM**, and provides **USB** (Universal Serial Bus) ports.

Central Processing Unit (Processor)

- The **processor** is the brain of the computer, managing programs based on user commands.
- It contains a **microprocessor chip** (ମାଇକ୍ରୋପ୍ରୋସେସର୍) and is kept cool with a **CPU fan**.
- Modern popular processors include Intel's **Dual-core**, **i3**, and **i7**.

DVD Writer

- The **DVD writer** reads and writes data to DVD discs and replaced older technologies like **CD-ROMs** and **floppy disks**.
- Newer technologies include **Blu-ray discs**, which can store up to **40 GB** of data.

RAM

- **RAM** (Random Access Memory) (ର୍ୟାମ୍) provides temporary working space for the computer.
- Applications utilize RAM while running; insufficient RAM can cause performance issues.
- Common types of RAM include **DDR**, **DDR1**, **DDR2**, and **DDR3**.

Power Supply

- The **power supply** (ପାୱର୍ ସପ୍ଲାଇ) distributes power to all computer components.
- It includes a fan for cooling and different wires for providing power to the motherboard, hard disk, and DVD writer.

Input and Output Devices

- **Input/Output Device** (ଇନ୍‌ପୁଟ/ଆଉଟପୁଟ ଡିଭାଇସ):
  - Hardware for communication between users and computers.
  - Sends **data** (ଡାଟା) to the computer (output) and receives data (input).

Input Devices

Input Devices (ଇନ୍‌ପୁଟ ଡିଭାଇସ):

- Used to send information to the computer.
- Sends signals to the **CPU** (**CPU**) for processing.

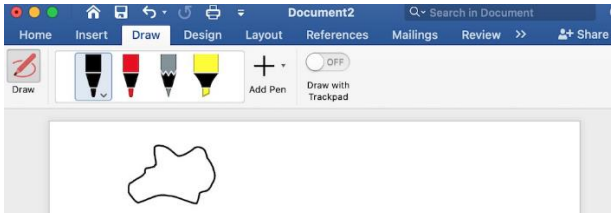
Types of Input Devices:

1. **Keyboard Devices** (କୀବୋର୍ଡ ଡିଭାଇସ)
2. **Pointing Devices** (ପଏଣ୍ଟିଂ ଡିଭାଇସ)
3. **Composite Devices** (କମ୍ପୋଜିଟ୍ ଡିଭାଇସ)
4. **Game Controller** (ଗେମ୍ କଣ୍ଟ୍ରୋଲର)
5. **Visual Devices** (ଭିଜୁଆଲ୍ ଡିଭାଇସ)
6. **Audio Input Devices** (ଆଡିଓ ଇନ୍‌ପୁଟ ଡିଭାଇସ)

Common Input Devices Explained:

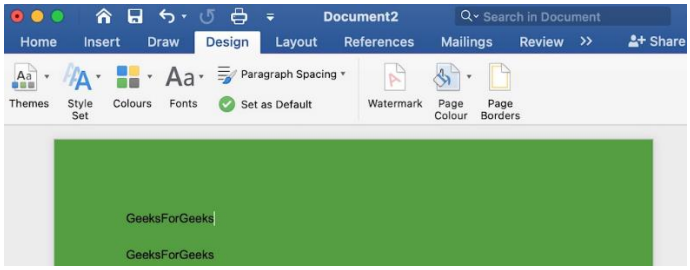
1. **Keyboard** (କୀବୋର୍ଡ):
   - Most common input device.
   - Used to type data.
   - Looks like a typewriter.
   - Available in sizes: **84 keys**, **101/102 keys**, **104 keys**, and **108 keys**.

Types of Keys:



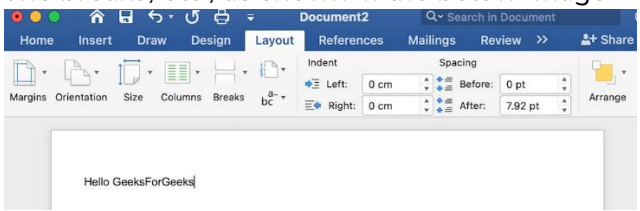
5. Design

It is the fourth tab present in the menu bar or ribbon. The design tab contains document designs that you can select, such as documents with centered titles, offset headings, left-justified text, page borders, watermarks, page color, etc., as shown in the below image:



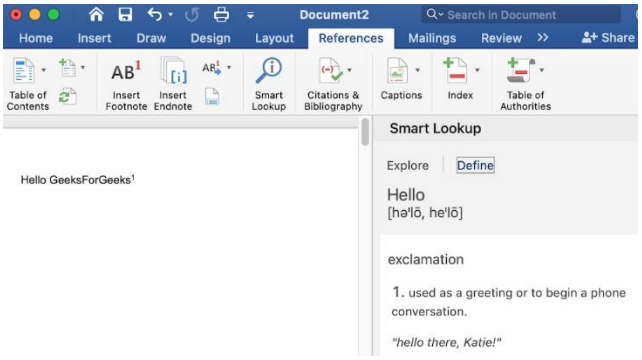
6. Layout

It is the fifth tab present on the menu bar or ribbon. It holds all the options that allow you to arrange your Microsoft Word document pages just the way you want them. It includes options like set margins, display line numbers, set paragraph indentation, and lines apply themes, control page orientation and size, line breaks, etc., as shown in the below image:



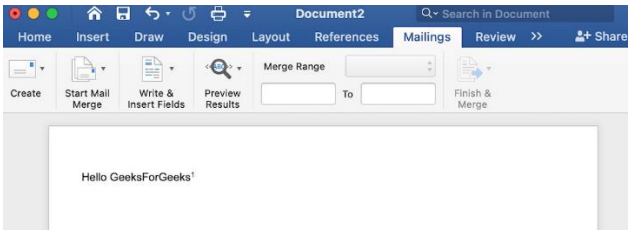
7. References

It is the sixth tab present in the menu bar or ribbon. The references tab lets you add references to a document, then create a bibliography at the end of the text. The references are generally stored in a master list, which is used to add references to further documents. It includes options like, Table of Contents, Footnotes, Citations & Bibliography, Captions, Index, Table of Authorities, smart look, etc. After selecting References tab, you will get the below options:



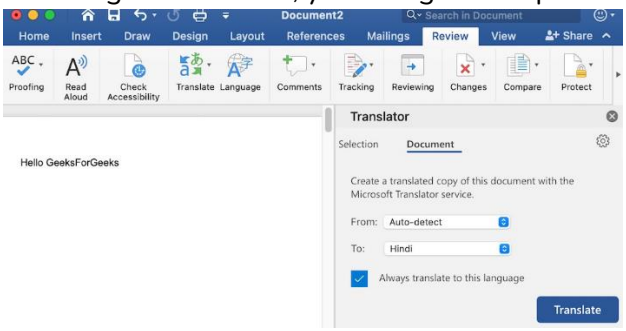
8. Mailings

It is the seventh tab present in the menu bar or ribbon. It is the least used tab in the menu bar. This tab is where you create labels, print them on envelopes, do mail merge, etc. After selecting mailing, you will get the below options:



9. Review

It is the eighth tab present in the menu bar or ribbon. The review tab contains, commenting, language, translation, spell check, word count tools. It is good for quickly locating and editing comments. After selecting a review tab, you will get the options below:



10. View

It is the ninth tab present in the menu bar or ribbon. View tab allows you to switch between single page or double page and also allows you to control the layout tools It includes print layout, outline, web layout, task pane, toolbars, ruler, header and footer, footnotes, full-screen view, zoom, etc. as shown in the below image:

Recognition
(d) Monitor and Printer
Answer: (d)

---

20. Which of the following is/are input devices?
(a) Track ball (b) Scanner
(c) Touch screen
(d) Magnetic Ink Card Reader (MICR)
(e) All of the above
Answer: (e)

---

21. Which of the following is not an output device?
(a) Monitor (b) Printer
(c) Headphone (d) Speaker
(e) Scanner
Answer: (e)

---

22. A projector is an _ _ _ _ _ _ device that can take images generated by a computer and reproduce them on a large, flat surface.
(a) input
(b) output
(c) input and output
(d) monitor input
Answer: (b)

---

23. The OCR stands for
(a) Outsized Character Reader
(b) Optical Character Reader
(c) Operational Character Reader
(d) Only Character Reader
Answer: (b)

---

24. The OMR stands for
(a) Optical Mark Recognition
(b) Optical Magnetic Reader
(c) Only Mark Recognition
(d) Optical Markup Recognition
Answer: (a)

---

25. The MICR stands for
(a) Magnetic Ink Card Reader
(b) Magnetic Ink Code Recognition
(c) Meta Ink Character Recognition
(d) None of these
Answer: (a)

---

26. Which kind of device is a digital camera?
(a) Output
(b) Input
(c) Input and Output
(d) Software
Answer: (b)

---

27. Which of the following groups consists of only output devices?
(a) Scanner, monitor, printer
(b) Mouse, monitor, printer
(c) Keyboard, monitor, printer
(d) Monitor, printer, plotter
Answer: (d)

---

28. Which of the following is not an output device?
(a) LCD (b) Printer
(c) CRT (d) Touch screen
Answer: (d)

---

29. The computer monitor is connected to CPU through
(a) Bus (b) Cable
(c) Wire (d) Line driver
Answer: (b)

---

30. The number of pixels displayed on the computer screen is called
(a) color depth (b) resolution
(c) refresh rate (d) viewing size
Answer: (b)

---

31. Which of the following is a combination of input-output devices?
(a) VDT (b) Keyboard
(c) Printer (d) Laser
Answer: (a)

---

32. Which of the following units are used to count the speed of the printer?
(a) CPM (b) PPM
(c) LPM (d) All of the above
Answer: (d)

---

33. The output quality of a printer is measured in
(a) dots per sq (b) dots per inch
(c) dots printer per inch (d) All of these
Answer: (a)

---

34. Which of the following is a kind of port?
(a) Serial (b) Parallel
(c) AGP (d) All of these
Answer: (d)

---

35. How many bits of data can be transferred by parallel port?

(a) 2 (b) 4
(c) 8 (d) 16
Answer: (c)

---

36. The full form of USB port is
(a) United Serial Bus
(b) Universal Serial By-pass
(c) Universal System Bus
(d) Universal Serial Bus
Answer: (d)

---

37. Which of the following is the fastest port data transfer?
(a) USB (b) Serial
(c) Parallel (d) Firewire
Answer: (d)

---

38. USB port is a
(a) Serial port
(b) Parallel port
(c) infrared port
(d) AGP port
Answer: (a)

---

39. Which post is widely used on wireless devices to connect with network devices for easy communication?
(a) Serial port (b) Parallel port
(c) Infrared port (d) AGP port
Answer: (c)

---

40. Which port can be used for transferring files between two computers?
(a) Serial port (b) Parallel port
(c) Firewire port (d) Infrared port
Answer: (c)

Computer Software

---

1. Which of the following instructs the computer hardware, what to do and how to do it?
(a) Hardware
(b) Operating system
(c) Software
(d) Device driver
Answer: (c)

---

2. A set of computer programs used on a computer to perform different tasks is called
(a) computer instructions
(b) processor
(c) software
(d) hardware
Answer: (c), Software helps to transform one interface into another interface.

---

3. Which of the following is not a type of software?
(a) System software
(b) Application software
(c) Utility software
(d) Driver software
Answer: (d), Software is generally classified into System software, Application software, and Utility software.

---

4. Which software is used to manage and control the hardware components and allows interaction between the hardware and the other different types of software?
(a) Application software
(b) System software
(c) Utility software
(d) Operating system
Answer: (b)

---

5. Which of the following is the part of system software?
(a) Operating system
(b) Utility software
(c) Browser software
(d) both a and b
Answer: (d)

---

6. The main function of computer software is to turn data into
(a) information
(b) program
(c) object
(d) both a and c
Answer: (a)

---

7. A computer program that functions as an intermediary between a computer user and the computer hardware is called
(a) software (b) hardware
(c) operating system. (d) driver
Answer: (c), An operating system is a primary component of the system software in a computer device. Application programs usually require an operating system to perform tasks.

---

38. Which of these is not a part of the UNIX operating system?
(a) Kernel
(b) Shell
(c) Programs
(d) Linux

Answer: (d)

39. Windows software was developed by a company called
(a) Microsoft Corporation
(b) IBM
(c) Wipro
(d) Apple

Answer: (a)

40. Which of the following is the latest version of MS Windows?
(a) Windows 7
(b) Windows 8
(c) Windows 14
(d) Windows 8.2

Answer: (b)

==========

Programming Concept -

---

1. The instructions that tell a computer how to carry out the processing tasks are referred to as computer
(a) programs
(b) processors
(c) input devices
(d) memory modules
(e) None of these

Answer: (a)

2. A set of rules for telling the computer what operations to perform is called a
(a) Procedural language
(b) Structures
(c) Natural language
(d) Command language
(e) Programming language

Answer: (e)

3. Which of the following contains specific rules and words that express the logical steps of an algorithm?
(a) Programming language
(b) Syntax
(c) Programming structure
(d) Logical chart
(e) Flow chart

Answer: (c)

4. A (n) ..... program is one that is ready to run and does not need to be altered in any way.
(a) interpreter
(b) high level
(c) compiler
(d) COBOL
(e) executable

Answer: (e)

5. A factor in the selection of source language is
(a) programmer skill
(b) language availability
(c) program compatibility with other software
(d) All of the above

Answer: (c)

6. Languages which can easily interact with the hardware are called
(a) High level languages
(b) Low level languages
(c) Middle level languages
(d) All of the above

Answer: (b)

7. Machine language
(a) is the language in which programs were first written
(b) is the only language understood by the computer
(c) differs from one type of computer to another
(d) All of the above

(e) None of the above

Answer: (d)

8. The use of combination of 1's and 0's is feature of which of the following type of computer language?
(a) High Level Language
(b) PASCAL
(c) Machine Language
(d) C
(e) COBOL

Answer: (c)

9. Each model of a computer has a unique
(a) assembly of a computer
(b) machine language
(c) high level language
(d) All of the above

Answer: (b)

10. All computer execute
(a) BASIC programs
(b) COBOL programs
(c) Machine language programs
(d) FORTRAN programs

Answer: (c)

11. The language which can be relocated easily is
(a) Machine language
(b) Assembly language
(c) Low level language
(d) Middle level language

Answer: (b)

12. Assembly language
(a) uses alphabetic codes in place of binary numbers used in machine language
(b) is the easiest language to write programs
(c) need not be translated into machine language
(d) All of the above
(e) None of the above

Answer: (a)

13. Which language is CPU dependent ?
(a) C
(b) Assembly
(c) Java
(d) All except Java

Answer: (b)

14. ..... serves as the bridge between raw hardware and programming layer of a computer system.
(a) Medium level language
(b) Low level language
(c) High level language
(d) Both '1' and '2'

Answer: (a)

15. Which of the following is a machine independent program?
(a) High level language
(b) Low level language
(c) Assembly language
(d) Machine language

Answer: (a)

16. Computer language used for calculation is
(a) LOGO
(b) FORTRAN
(c) BASIC
(d) C + +

Answer: (b)

17. Which of the following computer langua is a mathematically oriented language used for scientific problems?
(a) Fortran
(b) Cobol
(c) Lisp
(d) Prolog

Answer: (a)

18. FORTRAN stands for
(a) Formal Translation
(b) Formative Translation

(d) Search engine

Answer: (a)

---

39. Which of the following statement is not correct about the webpage?
(a) Webpage is a document that is displayed in the web browser on www.
(b) Static webpage contains fixed information to visitors that are not frequently changeD.
(c) In a dynamic webpage, information frequently changes.
(d) All of the above are correct.

Answer: (d)

---

40. What is the full form of DNS in a computer network?
(a) Domain Name System
(b) Decimal Number System
(c) Domain Numeric System
(d) Dual Name System

Answer: (a), DNS stores many types of information with domain names. The main function of DNS is to translate a domain name (computer host name) to IP address.

---

41. In a computer, .com, .edu, .gov, and .net are the examples of
(a) tag
(b) protocol
(c) top level domain extension
(d) IP address

Answer: (c)

---

42. Which of the following domain extension is not abbreviated for the country?
(a) .in
(b) .us
(c) .com
(d) .uk

Answer: (c)

---

43. Internet differentiate one computer from another computer on the basis of
(a) extension
(b) domain name
(c) IP address
(d) TCP

Answer: (c), domain name is the text version of IP address.

---

44. Which of the following domain name is used for an educational institution?
(a) .com
(b) .in
(c) .edu
(d) .inst

Answer: (c)

---

45. A computer that is used to store data or information for users on the internet is called
(a) web server
(b) web client
(c) web database
(d) web application

Answer: (a)

---

46. A protocol in the URL "https://www.scientecheasy.com" is
(a) www
(b) HTTPS
(c) .com
(d) All of the above
Answer: (b)

---

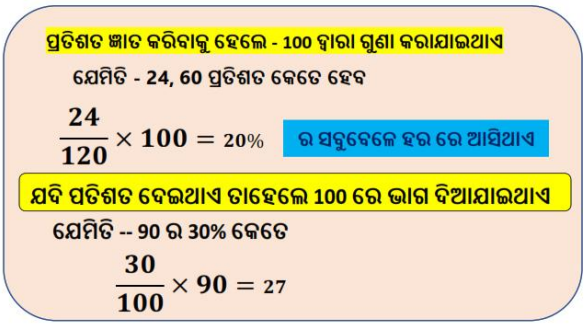
47. Each computer connected to internet must have a unique IP address. The IP address is converted into
(a) a binary string
(b) alphanumeric string
(c) a domain name
(d) a hexadecimal string

Answer: (c)

---

48. Currently, the unique IP address (or Internet Address) is
(a) 6 bytes long
(b) 4 bytes long

Percentage



TRICKY DOSE

ବୃଦ୍ଧି ହେଲେ	କମି ହେଲେ
$100 \xrightarrow{+10\%} 110$	$100 \xrightarrow{-10\%} 90$
$100 \xrightarrow{+20\%} 120$	$100 \xrightarrow{-20\%} 80$

ପ୍ରତିଶତ ର ଅର୍ଥ "ପ୍ରତି ଶହ" | ଅର୍ଥାତ ପ୍ରତିଶତ ସେଇ ଭଗ୍ନାଂଶ ଯାହାର ହାର 100 ତଥା ଲବ କୌଣସି ସଂଖ୍ୟା ହେଇପାରିବ ଅର୍ଥାତ $10\% = \frac{10}{100} = \frac{1}{10}$

$$20\% = \frac{20}{100} = \frac{1}{5}$$

ମନେ ରଖନ୍ତୁ (Remember)		
$25\% = \frac{1}{4}$	$90\% = \frac{9}{10}$	$33\frac{1}{3}\% = \frac{1}{3}$
$100\% = 1$	$6\frac{1}{4}\% = \frac{1}{16}$	$80\% = \frac{4}{5}$
$40\% = \frac{2}{5}$	$60\% = \frac{3}{5}$	$37\frac{1}{2}\% = \frac{3}{8}$
$30\% = \frac{3}{10}$	$75\% = \frac{3}{4}$	$150\% = \frac{3}{2}$

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 କେଜିରୁ 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'ଣ 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

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

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 ଜଣ ଛାତ୍ରଛାତ୍ରୀ ପାସ୍ କରିଛନ୍ତି, ତେବେ ଫେଲ୍ ର ପ୍ରତିଶତ ଜଣାନ୍ତୁ

$$\text{Fail} = 500 - 450 = 50$$

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

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 ପଢୁଛନ୍ତି । ଯଦି ପୁଅଙ୍କ ପ୍ରତିଶତ ୬୦ ଅଛି ତେବେ ଜାଣନ୍ତୁ ଝିଅଙ୍କ ସଂଖ୍ୟା

Boys	Girls

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

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

ଜଣେ 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 ସବୁବେଳେ 100 ରେ ହୋଇଥାଏ

Questions 11:

In an election, the winning candidate got 60 percent of the 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?

Total ଖର୍ଚ୍ଚ = 10% + 20% + 40% = 70%

Total Saving = $100\% - 70\% = 30\%$

Saving 30% ---------- 2700

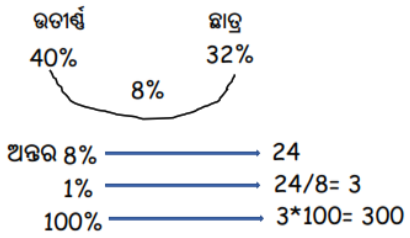
1% ---------- $\longrightarrow \frac{2700}{30} = 90$

100% ---------- = $100 \times 90 = 9000$

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 ଉତ୍ତୀର୍ଣ୍ଣ ହେବାକୁ ହେଲେ ୪୦ ପ୍ରତିଶତ ମାର୍କ ରହିବା ବାଧ୍ୟତାମୂଳକ, ଯଦି ଜଣେ ଛାତ୍ର ୩୨ ପ୍ରତିଶତ ମାର୍କ ପାଇ ୨୪ ପଏଣ୍ଟ ରେ ଫେଲ୍ ହୁଅନ୍ତି, 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.

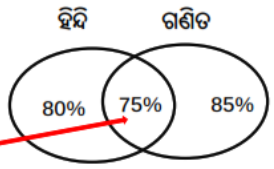
ଗୋଟିଏ ପରୀକ୍ଷାରେ ହିନ୍ଦୀରେ ୮୦ ପ୍ରତିଶତ ଓ ଗଣିତରେ ପାସ୍ କରି ଉଭୟ ୭୫ ପ୍ରତିଶତରେ ପାସ୍ କଲେ ଫେଲ୍ ର ପ୍ରତିଶତ ଜଣାପଡ଼ିବ।

H+ M= 80+85%= 165

ପାସ = 165-75 = 90%

Fail = 100- 90% = 10%

କମନ କୁ ହଟାଇଦେବା



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

ଆଗରୁ ପରେ [ଯେତେ ସମୟ ସେତେ ଥର ଗୁଣା କରିବା]

$$8000 \times \frac{110}{100} \times \frac{110}{100} = 9680$$

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 ଫ୍ରିଜ ର ମୂଲ୍ୟ ୧୨୮୦୦ ଯଦି ବର୍ଷକୁ ୨୦ ପ୍ରତିଶତ ଅବକ୍ଷୟ ହୁଏ ତେବେ ୨ ବର୍ଷ ତଳେ ଫ୍ରିଜର ମୂଲ୍ୟ କ'ଣ ଥିଲା

100 → -20 → 80 ଯଦି ପୂର୍ବେ ମାଗିଥିବ ତାହେଲେ ଉପରେ 100 ହେବ ଆଉ ହଉରେ ଯେତେ ପ୍ରତିଶତ କମି ହେବ ତାକୁ ରଖାଯିବ

$$12800 \times \frac{100}{80} \times \frac{100}{80} = 20000$$

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

120 → 90 ସିଧା 20 ବଢାଇବା 100 ଉପରେ

ସିଧା 10 ଘଟାଇବା 100 ଉପରେ

12 * 9 = 108 ତାହେଲେ 8% ର ବୃଦ୍ଧି

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

B, A ଠାରୁ କେତେ କମ ଅଟେ

$$\frac{20}{120} \times 100 = 16\frac{2}{3}\%$$

ମନେ ରଖନ୍ତୁ (କମ/ଅଧିକା ସବୁବେଳେ 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%

$$\frac{90}{80} \times 400 = 450 \text{ liter}$$

Then Water $= 450 - 400 = 50$ 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 ଇଂରାଜୀ ବିଷୟ ନେଇଥିବା ବେଳେ କିଛି ଉଭୟ ବିଷୟ ନେଇଛନ୍ତି। ଯଦି ୮୦ ପ୍ରତିଶତ ଛାତ୍ରଛାତ୍ରୀ ହିନ୍ଦୀ ବିଷୟ ଓ ଅଧା ଛାତ୍ରଛାତ୍ରୀ ଇଂରାଜୀ ବିଷୟ ନେଇଛନ୍ତି, ତେବେ କେତେ ପ୍ରତିଶତ ଛାତ୍ରଛାତ୍ରୀ ଉଭୟ ବିଷୟ ନେଇଛନ୍ତି

80 + 40 = 120

ତାହେଲେ ଉଭୟ ବିଷୟ ନେଇଥିଲେ = 120 – 100 = 20 %

Questions 22:

First 10% increase in the price of an article and thereafter Increased by 20%. If the last increased value is 33 , then what was the initial price?

ପ୍ରଥମେ ଗୋଟିଏ ସାମଗ୍ରୀର ମୂଲ୍ୟରେ ୧୦% ବୃଦ୍ଧି ଏବଂ ପରେ ୨୦% ବୃଦ୍ଧି । ଯଦି ଶେଷ ବର୍ଦ୍ଧିତ ମୂଲ୍ୟ 33 ଅଟେ, ତେବେ ପ୍ରାରମ୍ଭିକ ମୂଲ୍ୟ କ'ଣ ଥିଲା?

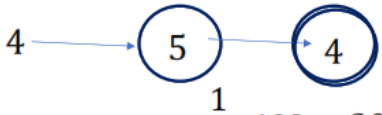
$$\text{price} \times \frac{110}{100} \times \frac{120}{100} = 33$$

$$\text{price} = 33 \times \frac{100}{132} = 25$$

Questions 23:

The income of a broker remained unchanged even if the rate of brokerage increased from 4% to 5% on a commodity. What percentage decreased in his business

କୌଣସି ଜିନିଷ ଉପରେ ବ୍ରୋକରେଜ୍ ହାର ୪%ରୁ ୫%କୁ ବୃଦ୍ଧି ପାଇଥିଲେ ମଧ୍ୟ ଦଲାଲଙ୍କ ଆୟ ଅପରିବର୍ତ୍ତିତ ରହିଥିଲା। ତାଙ୍କ ବ୍ୟବସାୟରେ କେତେ ପ୍ରତିଶତ ହ୍ରାସ ପାଇଛି

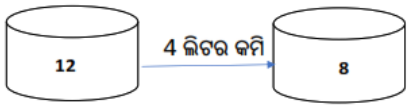


$$\frac{1}{5} \times 100 = 20\%$$

Questions 24:

If a 12 liter solution containing 7% salts is boiled, 4 liters of water If evaporated, what is the percentage of salts in the remaining solution?

ଯଦି ୭% ଲୁଣ ଥିବା ଏକ ୧୨ ଲିଟର ଦ୍ରବଣ ଫୁଟାଯାଏ, ୪ ଲିଟର ପାଣି ଯଦି ବାଷ୍ପୀଭୂତ ହୁଏ, ତେବେ ଅବଶିଷ୍ଟ ଦ୍ରବଣରେ ଲୁଣର ପ୍ରତିଶତ କେତେ?



$$7 \times \frac{12}{8} = 10.5\%$$

ପାଣି କମିଯିବାରୁ ଲୁଣ ର ପ୍ରତିଶତ ବଢ଼ିଯିବ

Questions 25:

If there is a 25% reduction in the price of apples, a customer gets 2kg in 240 more apples. What is the reduced price per kg ?

ଯଦି ସେଓ ର ମୂଲ୍ୟରେ ୨୫% ହ୍ରାସ କରାଯାଏ ତେବେ ଜଣେ ଗ୍ରାହକ ଙ୍କୁ ଆଉ ୨୪୦ ଟି ସେଓରେ ୨ କେଜି ମିଳିଥାଏ । କିଲୋ ଗ୍ରାମ ପିଛା ହ୍ରାସ ପାଇଥିବା ମୂଲ୍ୟ କ'ଣ

1 କେଜି ର ପ୍ରତିଶତ (ସବୁବେଳେ ବର୍ତମାନ ଭାବରେ ଗଣାଯାଏ)

ତାହେଲେ 1 କେଜି = 240/2 = 120 ପ୍ରତି କିଲୋ।

ବର୍ତମାନ ଭାବ =

ତାହେଲେ 120 ର 25% = 120×25/100 = 30 ଟଙ୍କା।

Questions 26:

In a school, boys and girls are in the ratio 3:2. If 20% of the boys and 30% of the girls are scholarships, then what is the percentage of students who do not take the scholarship?

ଗୋଟିଏ ବିଦ୍ୟାଳୟରେ ବାଳକ ଓ ବାଳିକା ଙ୍କ ଅନୁପାତ ୩:୨ ରହିଛି। ଯଦି ୨୦% ପୁଅ ଓ ୩୦% ଝିଅ ଛାତ୍ରବୃତ୍ତି ପାଆନ୍ତି, ତେବେ ଛାତ୍ରବୃତ୍ତି ଗ୍ରହଣ କରୁନଥିବା ଛାତ୍ରଛାତ୍ରୀଙ୍କ ପ୍ରତିଶତ କେତେ?

Boys		Girls
3	:	2
20% 80%		30% 70%

3 ର 80% = 2.4 2 ର 70% = 1.4

ତାହେଲେ ଛାତ୍ରବୃତ୍ତି ନେଉଥିବା ବିଦ୍ୟାର୍ଥୀ = 3.8/5×100 = 76%

Questions 27:

Out of 200 people in a village, 111 are literate. What is the percentage of illiterate people in the village?

ଗୋଟିଏ ଗାଁର 200 ଜଣଙ୍କ ମଧ୍ୟରୁ 111 ଜଣ ସାକ୍ଷର। ଗାଁରେ ଅଶିକ୍ଷିତ ଲୋକଙ୍କ ସଂଖ୍ୟା କେତେ?

Uneducated person $= 200 - 111 = 89$

$$\% = \frac{89}{200} \times 100 = 44.5\%$$

Questions 28:

If the price of a book is first decreased by 25% and then increased by 20%, then the net change in the price will be?

Cost Price For the manufacture = Rs. x (let)

$\therefore x \times \frac{118}{100} \times \frac{120}{100} \times \frac{125}{100}$

$= 15045$

$\Rightarrow x = \frac{15045 \times 1000000}{118 \times 120 \times 125}$

$=$ Rs. 8500

Questions 35:

A dealer sold an article at 6% loss. Had he sold it for Rs. 64 more, he would have made a profit of 10%. Then the cost of the article is

ଜଣେ ଡିଲର ୬% କ୍ଷତିରେ ଏକ ସାମଗ୍ରୀ ବିକ୍ରି କରିଥିଲେ । ଯଦି ସେ ଏହାକୁ ଅଧିକ ୬୪ ଟଙ୍କାରେ ବିକ୍ରି କରିଥାନ୍ତେ, ତେବେ ସେ ୧୦% ଲାଭ କରିଥାନ୍ତେ। ତା'ପରେ ଲେଖାର ମୂଲ୍ୟ କ'ଣ ହେବ

(1) Rs. 400 (2) Rs. 200

(3) Rs. 164 (4) Rs. 464

C.P. of article = Rs, x (let).

According to the question,

$\frac{94x}{100} + 64 = \frac{x \times 110}{100}$

$\Rightarrow \frac{110x}{100} - \frac{94x}{100} = 64$

$\Rightarrow \frac{16x}{100} = 64 \Rightarrow x = \frac{64 \times 100}{16}$

$=$ Rs. 400

Questions 36:

Dillip has some apples. He sold 40% more than he ate. If he sold 70 apples, how many did he eat ?

ଦିଲ୍ଲୀପର କିଛି ସେଓ ରହିଛି। ସେ ଯେତିକି ଖାଇଥିଲେ ତା'ଠାରୁ ୪୦% ଅଧିକ ବିକ୍ରି କରିଥିଲେ। ଯଦି ସେ ୭୦ଟି ସେଓ ବିକ୍ରି କଲେ, ତେବେ ସେ କେତେ ଖାଇଲେ ?

(1) 18 (2) 42

(3) 50 (4) 90

Let Kamal eat x apples.

According to the question,

$x \times \frac{140}{100} = 70 \Rightarrow \frac{14x}{10} = 70$

$\Rightarrow \mathrm{x} = \frac{70 \times 10}{14} = 50$

Questions 37:

The ratio of the C.P. and S.P. of an article is 20 : 21. What is the gain per cent ?

ଏକ ପ୍ରବନ୍ଧର ସିପି ଏବଂ ଏସପିର ଅନୁପାତ ହେଉଛି 20 : 21 । ପ୍ରତିଶତ ଲାଭ କ'ଣ ?

(1) 5% (2) 5.5%

(3) 6% (4) 6.25%

Gain % $= \frac{(21-20)}{20} \times 100$

$= \frac{1}{20} \times 100 = 5\%$

Questions 38:

If the ratio of cost price and the selling price is 5 : 6, the gain per cent is

ଯଦି ଖର୍ଚ୍ଚ ମୂଲ୍ୟ ଏବଂ ବିକ୍ରୟ ମୂଲ୍ୟର ଅନୁପାତ 5 : 6 ଅଟେ, ତେବେ ଲାଭ ପ୍ରତିଶତ କ'ଣ ହେବ

(1) 20% (2) 33.3 %

(3) 25% (4) 30%

Let the cost price $= 5x$ and

the selling price $= 6x$.

Gain % $= \frac{6x-5x}{5x} \times 100 = 20\%$

Questions 39:

In what proportion must water be added with milk to gain 20% by selling the mixture at cost price?

ମିଶ୍ରଣକୁ ମୂଲ୍ୟରେ ବିକ୍ରି କରି 20% ଲାଭ ପାଇବା ପାଇଁ କ୍ଷୀର ସହିତ କେତେ ଅନୁପାତରେ ପାଣି ମିଶାଯିବା ଆବଶ୍ୟକ?

(1) 1 : 5 (2) 4 : 1

(3) 5 : 1 (4) 1 : 1

If the cost of milk be Rs. 100 , then S.P. = Rs. 120

$\therefore$ Required ratio $= 20:100 = 1:5$

Questions 40:

If the loss per cent on an article is 15%, then the ratio of the cost price and the selling price will be :

ଯଦି କୌଣସି ଦ୍ରବ୍ୟର କ୍ଷତି ପ୍ରତିଶତ 15% ହୁଏ, ତେବେ ମୂଲ୍ୟ ମୂଲ୍ୟ ଏବଂ ବିକ୍ରୟ ମୂଲ୍ୟର ଅନୁପାତ ହେବ

(1) 17 : 20 (2) 20 : 17

(3) 23 : 15 (4) 15 : 23

A) Grandfather / ବଡ଼ ବାପା
B) Father / ବାପା
C) Uncle / କକା
D) Brother / ଭାଇ
Ans: A) Grandfather / ବଡ଼ ବାପା

If X is the son of Y and Y is the daughter of Z, how is X related to Z?
ଯଦି X ହେଉଛି Y ଙ୍କ ପୁଅ ଏବଂ Y ହେଉଛି Z ଙ୍କ ଝିଅ, X କେମିତି Z ସହିତ ସମ୍ପର୍କିତ?
A) Grandfather / ବଡ଼ ବାପା
B) Grandson / ପୁଅ-ନାତି
C) Son / ପୁଅ
D) Brother / ଭାଇ
Ans: B) Grandson / ପୁଅ-ନାତି

A is B's daughter, C is D's son, E is A's brother. What is D to E?
A ହେଉଛି B ଙ୍କ ଝିଅ, C ହେଉଛି D ଙ୍କ ପୁଅ, E ହେଉଛି A ଙ୍କ ଭାଇ। D କେମିତି E ସହିତ ସମ୍ପର୍କିତ?
A) Uncle / କକା
B) Father / ବାପା
C) Grandfather / ବଡ଼ ବାପା
D) Brother / ଭାଇ
Ans: A) Uncle / କକା

A is C's mother. B is A's brother. D is C's sister. How is D related to B?
A ହେଉଛି C ଙ୍କ ମା। B ହେଉଛି A ଙ୍କ ଭାଇ। D ହେଉଛି C ଙ୍କ ଭଉଣୀ। D କେମିତି B ସହିତ ସମ୍ପର୍କିତ?
A) Sister / ଭଉଣୀ
B) Daughter / ପୁଅ-ଝୁଅ
C) Niece / ଭଣଜା
D) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ
Ans: C) Niece / ଭଣଜା

A is the father of B, B is the brother of C, and D is the mother of E. If D is the sister of A, how is E related to C?
A ହେଉଛି B ଙ୍କ ବାପା, B ହେଉଛି C ଙ୍କ ଭାଇ, ଏବଂ D ହେଉଛି E ଙ୍କ ମା। ଯଦି D ହେଉଛି A ଙ୍କ ଭଉଣୀ, E କେମିତି C ସହିତ ସମ୍ପର୍କିତ?
A) Brother / ଭାଇ
B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ
C) Uncle / କକା
D) Niece / ଭଣଜା
Ans: B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

P is the mother of Q. Q is the daughter of R. What is P's relationship to R?
P ହେଉଛି Q ଙ୍କ ମା। Q ହେଉଛି R ଙ୍କ ଝିଅ। P କେମିତି R ସହିତ ସମ୍ପର୍କିତ?
A) Sister / ଭଉଣୀ
B) Mother / ମା
C) Wife / ସ୍ତ୍ରୀ
D) Daughter / ଝିଅ
Ans: C) Wife / ସ୍ତ୍ରୀ

If A is the father of B and C is the daughter of A, what is B to C?
ଯଦି A ହେଉଛି B ଙ୍କ ବାପା ଏବଂ C ହେଉଛି A ଙ୍କ ଝିଅ, B କେମିତି C ସହିତ ସମ୍ପର୍କିତ?
A) Brother / ଭାଇ
B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ
C) Sister / ଭଉଣୀ
D) Uncle / କକା
Ans: A) Brother / ଭାଇ

X is Y's daughter. Y is the sister of Z. What is X's relation to Z?
X ହେଉଛି Y ଙ୍କ ଝିଅ। Y ହେଉଛି Z ଙ୍କ ଭଉଣୀ। X କେମିତି Z ସହିତ ସମ୍ପର୍କିତ?
A) Niece / ଭଣଜା
B) Daughter / ଝିଅ
C) Sister / ଭଉଣୀ
D) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ
Ans: A) Niece / ଭଣଜା

If P is the son of Q and R is the daughter of S, who is the mother of Q, what is R's relation to P?
ଯଦି P ହେଉଛି Q ଙ୍କ ପୁଅ ଏବଂ R ହେଉଛି S ଙ୍କ ଝିଅ, ଯିଏ Q ଙ୍କ ମା, R କେମିତି P ସହିତ ସମ୍ପର୍କିତ?

A) Sister / ଭଉଣୀ

B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

C) Niece / ଭଣଜା

D) Aunt / କକୀ

Ans: C) Niece / ଭଣଜା

Rahul said, "The boy in that picture is the brother of the daughter of my paternal grandfather's only son." How is the boy in the picture related to Rahul?
ରାହୁଲ କହିଛନ୍ତି, "ସେଇ ଚିତ୍ରରେ ଥିବା ପୁଅ ହେଉଛି ମୋର ପିତୃକାଳୀନ ଦାଦାଙ୍କର କେବଳ ପୁଅର ଝିଅର ଭାଇ।" ସେଇ ପୁଅ ରାହୁଲ ସହିତ କିପରି ସମ୍ପର୍କିତ?

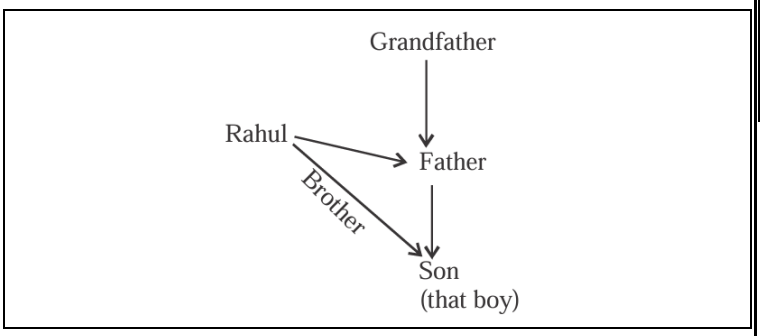
A) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

B) Father / ବାପା

C) Nephew / ଭାତିଜା

D) Brother / ଭାଇ

Ans: D) Brother / ଭାଇ



Anjali's brother, Shyam, is the grandfather of Rajendra's son. How is Shyam related to Rajendra?
ଅଞ୍ଜଳୀଙ୍କର ଭାଇ, ଶ୍ୟାମ, ରାଜେନ୍ଦ୍ରଙ୍କର ପୁଅଙ୍କର ଦାଦା। ଶ୍ୟାମ କିପରି ରାଜେନ୍ଦ୍ର ସହିତ ସମ୍ପର୍କିତ?

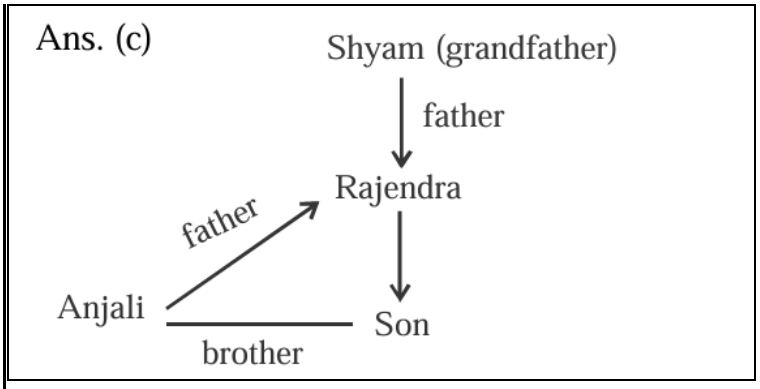
A) Brother / ଭାଇ

B) Son / ପୁଅ

C) Father / ବାପା

D) Maternal Uncle / ମାଆର କକା

Ans: C) Father / ବାପା



Sumit's grandfather's brother is the father of Hemant's father. How is Sumit related to Hemant?
ସୁମିତଙ୍କର ଦାଦାଙ୍କର ବାପା ହେଉଛି ହେମାନ୍ତଙ୍କର ବାପାଙ୍କର ବାପା। ସୁମିତ କିପରି ହେମାନ୍ତ ସହିତ ସମ୍ପର୍କିତ?

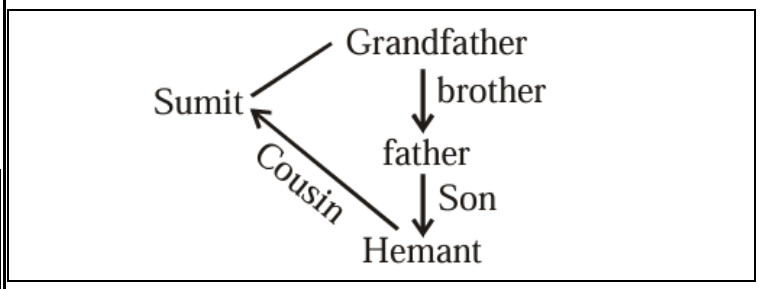
A) Brother / ଭାଇ

B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

C) Father / ବାପା

D) Uncle / କକା

Ans: B) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ



Raju introduces Yash by saying, "He is the husband of the granddaughter of my grandmother's husband." How is Yash related to Raju?
ରାଜୁ ବୋଲେ, "ସେ ହେଉଛି ମୋର ଦାଦୀଙ୍କର ପତିତି ପୁଅଙ୍କର ପତି।" ୟାଶ ରାଜୁ ସହିତ କିପରି ସମ୍ପର୍କିତ?

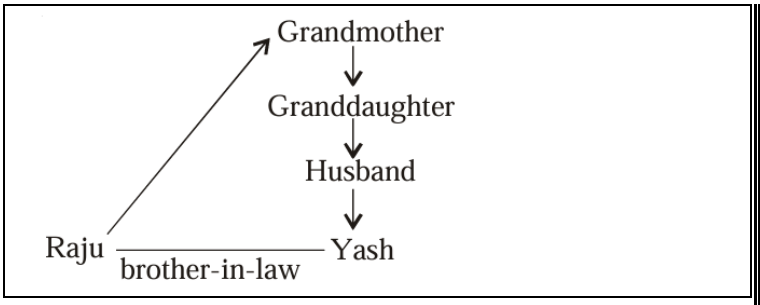
A) Nephew / ଭାତିଜା

B) Father / ବାପା

C) Brother / ଭାଇ

D) Brother-in-law / ବାଡି ସାମ୍ପ୍ରଦାୟିକ

Ans: D) Brother-in-law / ବାଡି ସାମ୍ପ୍ରଦାୟିକ



Pointing towards a lady in a photograph, Sushma says, “She is the mother of my grandfather’s son.” How is Sushma related to the lady in the picture?
ଏକ ଚିତ୍ରରେ ଥିବା ମହିଳାଙ୍କୁ ସୁଶମା କହିଛନ୍ତି, "ସେ ହେଉଛି ମୋର ଦାଦାଙ୍କର ପୁଅଙ୍କର ମାଆ।" ସୁଶମା ସେଇ ମହିଳା ସହିତ କିପରି ସମ୍ପର୍କିତ?

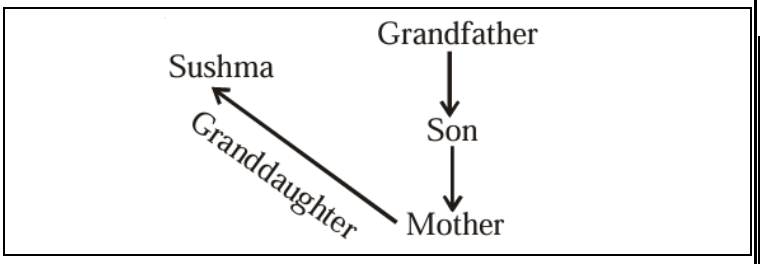
A) Granddaughter / ପାଣି ନାନୀ

B) Mother-in-law / ସାମ୍ପ୍ରଦାୟିକ

C) Sister / ବହନ

D) Mother / ମାଆ

Ans: A) Granddaughter / ପାଣି ନାନୀ



Pointing to a lady, Anju says, “She is the sister of my brother's mother.” How is the lady related to Anju?
ଏକ ମହିଳାଙ୍କୁ ଦେଖାଉଥିବା ସମୟରେ, ଅଞ୍ଜୁ କହେ, “ସେ ହେଉଛି ମୋର ଭାଇଙ୍କର ମାଆଙ୍କର ବହନ।” ସେଇ ମହିଳା ଅଞ୍ଜୁ ସହିତ କିପରି ସମ୍ପର୍କିତ?

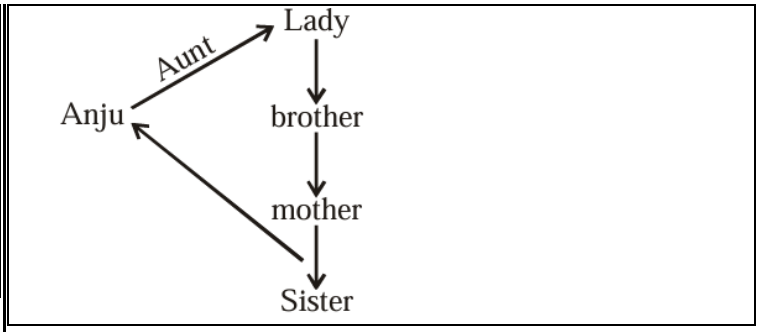
A) Mother-in-law / ସାମ୍ପ୍ରଦାୟିକ

B) Niece / ଭାତିଜୀ

C) Aunt / କକା

D) Sister / ବହନ

Ans: C) Aunt / କକା



Ruby, Vishal's sister, has a son Jitendra and a daughter Sakshi. Priya is the sister of Jitendra's mother. How is Sakshi related to Priya?
ରୁବୀ, ବିଶାଲଙ୍କର ବହନ, ଜିତେନ୍ଦ୍ରଙ୍କର ଏକ ପୁଅ ଓ ସକ୍ଷୀଙ୍କର ଏକ ଝିଅ ଅଛି। ପ୍ରିୟା ଜିତେନ୍ଦ୍ରଙ୍କର ମାଆଙ୍କର ବହନ। ସକ୍ଷୀ ପ୍ରିୟା ସହିତ କିପରି ସମ୍ପର୍କିତ?

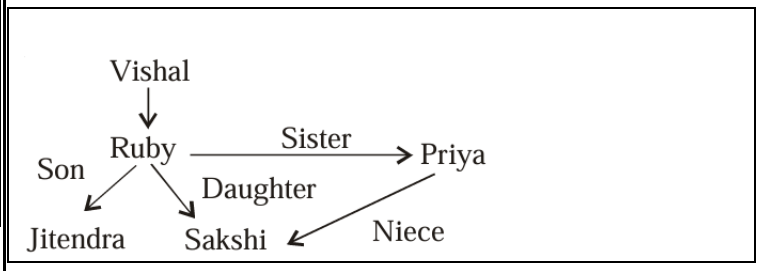
A) Mother / ମାଆ

B) Granddaughter / ପାଣି ନାନୀ

C) Sister / ବହନ

D) Niece / ଭାତିଜୀ

Ans: D) Niece / ଭାତିଜୀ



Pointing towards a man, Soumya says, “His mother’s daughter is my sister.” How is Soumya related to the man?
ଏକ ପୁରୁଷକୁ ଦେଖାଉଥିବା ସମୟରେ, ସୌମ୍ୟା କହେ, "ତାଙ୍କର ମାଆଙ୍କର ଝିଅ ମୋର ବହନ।" ସୌମ୍ୟା ସେଇ ପୁରୁଷ ସହିତ କିପରି ସମ୍ପର୍କିତ?

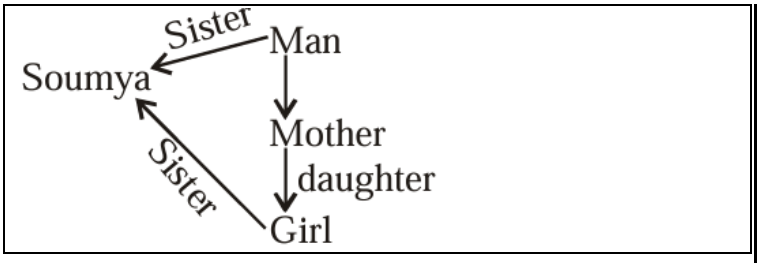
A) Sister / ବହନ

B) Niece / ଭାତିଜୀ

C) Mother-in-law / ସାମ୍ପ୍ରଦାୟିକ

D) Aunt / କକା

Ans: A) Sister / ବହନ



Introducing a boy, a girl says, “He is the son of the only sister of my mother's brother.” How is the boy related to that girl?
ଏକ ଝିଅ ପୁଅକୁ ପରିଚୟ କରାଇଛି, "ସେ ହେଉଛି ମୋର ମାଆଙ୍କର ଭାଇଙ୍କର କେବଳ ବହନଙ୍କର ପୁଅ।" ସେଇ ପୁଅ ସେଇ ଝିଅ ସହିତ କିପରି ସମ୍ପର୍କିତ?

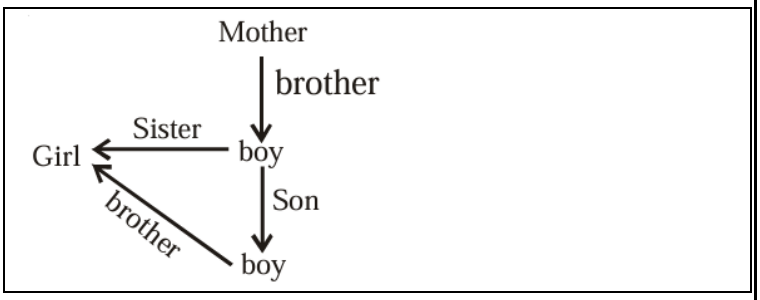
A) Father-in-law / ବାପା-ସାମ୍ପ୍ରଦାୟିକ

B) Brother / ଭାଇ

C) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

D) Niece / ଭାତିଜୀ

Ans: C) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ



Introducing a man, a woman says, “He is the son-in-law of the wife of my father and I am the only child of my parents.” How is the man related to the woman?
ଜଣେ ପୁରୁଷଙ୍କୁ ପରିଚିତ କରାଇ ଜଣେ ମହିଳା କୁହନ୍ତି, ସେ ହେଉଛନ୍ତି ମୋ ପିତାଙ୍କ ପତ୍ନୀଙ୍କ ଭାଇଁ ଏବଂ ମୁଁ ମୋର ପିତାମାତାଙ୍କର ଏକମାତ୍ର ସନ୍ତାନ। ପୁରୁଷଟି ମହିଳାଙ୍କ ସହିତ କିପରି ଜଡିତ?

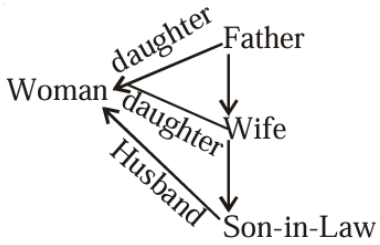
A) Nephew / ଭଣଜା

B) Husband / ପତି

C) Brother-in-law / ବାଇ

D) Cousin / ସମସ୍ତ

Ans: B) Husband / ପତି



Pointing towards a lady in a photograph, Ram says, “Her mother is the mother-in-law of my father’s brother.” How is the lady related to Ram?
ଫଟୋଗ୍ରାଫରେ ଜଣେ ମହିଳାଙ୍କ ଆଡକୁ ଅଙ୍ଗୁଳି ନିର୍ଦ୍ଦେଶ କରି ରାମ କୁହନ୍ତି, “ତାଙ୍କ ମା ହେଉଛି ମୋ ବାପାଙ୍କ ଭାଇର ଶାଶୁ।” ମହିଳା ରାମଙ୍କ ସହିତ କେମିତି ସମ୍ପର୍କିତ?

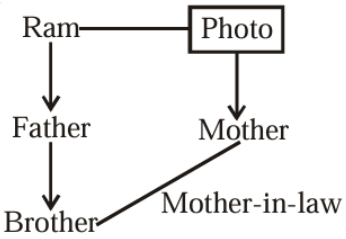
A) Mother / ମା

B) Sister / ଭଉଣୀ

C) Aunt / ବୋହୂ/ନଣନ୍ଦ

D) Mother-in-law / ଶାଶୁ

Ans: C) Aunt / ବୋହୂ/ନଣନ୍ଦ



Shubham's mother is the sister-in-law of Shashi, and Shashi is the only daughter of Parmeshwar. Ravi is Shubham's brother. How is Shashi related to Ravi?
ଶୁଭମଙ୍କ ମାତା ଶଶିଙ୍କ ବୋହୂ ଏବଂ ଶଶି ପରମେଶ୍ୱରଙ୍କ ଏକମାତ୍ର ଝିଅ। ରବି ହେଉଛନ୍ତି ଶୁଭମଙ୍କର ଭାଇ| ଶଶି ରବି ସହିତ କିପରି ଜଡିତ?

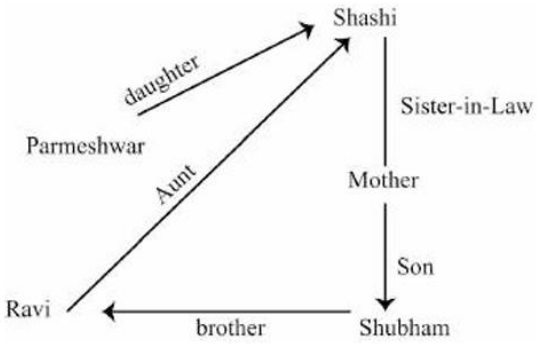
A) Grandmother / ବଡ ମା

B) Aunt / ବୋହୂ/ନଣନ୍ଦ

C) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

D) Sister / ଭଉଣୀ

Ans: B) Aunt / ବୋହୂ/ନଣନ୍ଦ



Pointing towards a photograph of a girl, Rajesh says, "She is the only daughter of my father." How is Rajesh related to the girl?
ଜଣେ ଝିଅ ର ଫଟୋଗ୍ରାଫ୍ ଆଡକୁ ଦର୍ଶାଇ ରାଜେଶ କୁହନ୍ତି, ସେ ମୋର ପିତାଙ୍କ ଏକମାତ୍ର ଝିଅ । ରାଜେଶ କେମିତି ସେ ଝିଅ ସହିତ ସମ୍ପର୍କିତ?

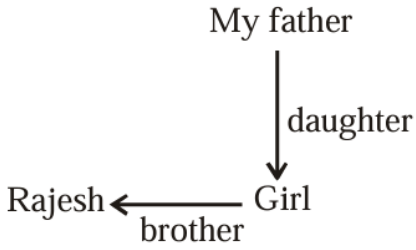
A) Son / ପୁଅ

B) Brother / ଭାଇ

C) Father / ବାପା

D) Uncle / କକା

Ans: B) Brother / ଭାଇ



Introducing a girl, a boy says, "She is the daughter of my father's only brother-in-law." How is the girl related to the boy?
ଗୋଟିଏ ଝିଅ ର ପରିଚୟ ଦେଇ ଜଣେ ପୁଅ କୁହନ୍ତି, ସେ ମୋ ବାପାଙ୍କ ଏକମାତ୍ର ଶଳା ଙ୍କ ଝିଅ । ଝିଅ ଟି ପୁଅ ସହିତ କିପରି ଜଡିତ?

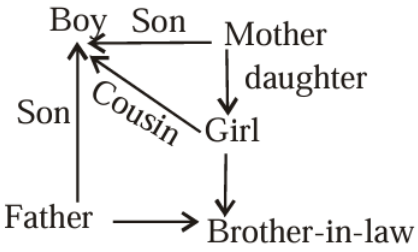
A) Sister-in-law / ବୋହୂ/ନଣନ୍ଦ

B) Granddaughter / ପୁଅ-ନାତି

C) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

D) Daughter / ଝିଅ

Ans: C) Cousin



Sourabh's mother is the daughter of Ajeet's only sister. Ritik is the grandson of Ajeet. How is Ritik related to Sourabh?
ସୌରଭଙ୍କର ମା ହେଉଛନ୍ତି ଅଜିତଙ୍କ ଏକମାତ୍ର ଭଉଣୀର ଝିଅ ରିତିକ୍ ଅଜିତଙ୍କ ନାତି | ରିତିକ ସୌରଭ ସହିତ କେମିତି ସମ୍ପର୍କିତ?

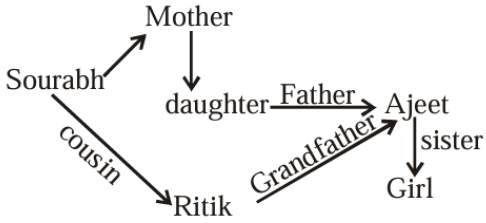
A) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

B) Brother / ଭାଇ

C) Uncle / କକା

D) Maternal uncle / ମାତୃତ୍ୱ ମାମୁଁ

Ans: A) Cousin



Introducing a girl, a man says, “She is the daughter of my father’s daughter.” How is the girl related to the man?
ଜଣେ ଝିଅ ର ପରିଚୟ ଦେଇ ଜଣେ ବ୍ୟକ୍ତି କୁହନ୍ତି, ସେ ମୋର ପିତାଙ୍କ ଝିଅ । ଝିଅ ଟି ପୁରୁଷ ସହିତ କିପରି ଜଡିତ?

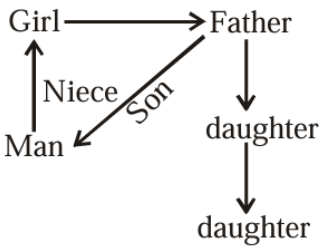
A) Niece / ଭଣଜା

B) Daughter / ଝିଅ

C) Sister / ଭଉଣୀ

D) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

Ans: A) Niece



Introducing a boy, Amar said, "He is the son of the

daughter of my grandfather's son." How is that boy related to Amar?
ଏକ ପୁଅର ପରିଚୟ ଦେଇ ଅମର କହିଛନ୍ତି, ସେ ମୋର ଜେଜେବାପାଙ୍କ ଝିଅ ର ପୁଅ। ସେହି ବାଳକ ଅମର ସହିତ କିପରି ଜଡିତ?

A) Maternal uncle / ମାତୃତ୍ୱ ମାମୁଁ

B) Nephew / ଭଣଜା

C) Brother / ଭାଇ

D) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

Ans: D) Cousin

According to statement of Amar, the boy is cousin of Amar.

Johnny's father is the brother-in-law of Nisha's only sister. How is Johnny related to Nisha?
ଜନିଙ୍କ ପିତା ନିଶାଙ୍କ ଏକମାତ୍ର ଭଉଣୀର ଭାଉଜ | ଜନି ନିଶା ସହିତ କିପରି ଜଡିତ?

A) Son / ପୁଅ

B) Grandson / ପୁଅ-ନାତି

C) Father / ବାପା

D) Cousin / ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

Ans: A) Son / ପୁଅ

According to question, Johnny is son of Nisha.

Introducing a boy, Ankit said, "He is the son of the daughter of my grandfather's son." How is that boy related to Ankit?
ଏକ ପୁଅର ପରିଚୟ ଦେଇ ଅଙ୍କିତ କହିଛନ୍ତି ଯେ ସେ ମୋର ଜେଜେବାପାଙ୍କ ଝିଅ ର ପୁଅ। ସେହି ବାଳକ ଅଙ୍କିତ ସହିତ କିପରି ଜଡିତ?

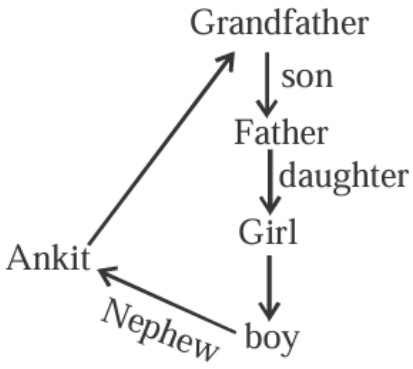
A) Cousin/ସମ୍ପର୍କୀୟ ଭାଇ ଭଉଣୀ

B) Brother/ଭାଇ

C) Nephew/ଭଣଜା

D) Son/ପୁଅ

Ans: D) Son / ପୁଅ



A is B's daughter. B is C's mother. D is C's brother. How is D related to A?
A, ହେଉଛି Bର ଝିଅ। B, Cର ମା। D, Cର ଭାଇ। ତାହେଲେ D, A ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Father/ପିତା

(b) Grandfather/ପରଦାଦା

(c) Brother/ଭାଇ

(d) Son/ପୁଅ

Answer: (c) Brother/ଭାଇ

P is Q's brother. R is Q's mother. S is R's father. T is S's mother. How is P related to T?
P, Qର ଭାଇ। R, Qର ମା। S, Rର ପିତା। T, Sର ମା। ତାହେଲେ P, T ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Granddaughter/ନାତୁଣୀ

(b) Great-grandson/ନାତି

(c) Grandson/ନାତି

(d) Grandmother/ଦାଦୀ

Answer: (c) Grandson/ନାତି

A is B's brother. C is D's father. E is B's mother. A and D are brothers. How is E related to C?
A, ହେଉଛି Bର ଭାଇ। C, Dର ପିତା। E, Bର ମା। A ଓ D ଭାଇ ଅଟନ୍ତି। ତାହେଲେ E, C ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Sister/ଭଉଣୀ

(b) Sister-in-law/ଶାଳି

(c) Niece/ଭାନିଜି

(d) Wife/ସ୍ତ୍ରୀ

Answer: (b) Sister-in-law/ଶାଳି

A is the sister of B. B is the brother of C. C is the son of D. How is D related to A?
A, ହେଉଛି Bର ଭଉଣୀ। B, ହେଉଛି Cର ଭାଇ। C, ହେଉଛି Dର ପୁଅ। ତାହେଲେ D, A ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Mother/ମା
(b) Daughter/ଝିଅ
(c) Son/ପୁଅ
(d) Uncle/ମାମା
Answer: (d) Uncle/ମାମା

B is the brother of A, whose only sister is the mother of C. D is the maternal grandmother of C. How is A related to D?
B, ହେଉଛି Aର ଭାଇ। A ର ଜେଉ ଏକମାତ୍ର ଭଉଣୀ C ର ମା। D, ହେଉଛି C ର ମାମାମା। ତାହେଲେ A, D ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Daughter-in-law/ପୁଅ ବୋହୂ
(b) Daughter/ଝିଅ
(c) Aunt/ମାଉସୀ
(d) Nephew/ଭାତିଜା
Answer: (c) Aunt/ମାଉସୀ

A and B are sisters. R and S are brothers. A's daughter is R's sister. What is B's relation to S?
A ଓ B, ହେଉଛନ୍ତି ଜୀଉଁଭଉଣୀ। R ଓ S, ହେଉଛନ୍ତି ଭାଇ। Aର ଝିଅ, ହେଉଛି Rର ଭଉଣୀ। ତାହେଲେ B, S ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Mother/ମା
(b) Grandmother/ମାମାମା
(c) Sister/ଭଉଣୀ
(d) Aunt/ମାଉସୀ
Answer: (d) Aunt/ମାଉସୀ

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 A?
A, ହେଉଛି Bର ଭାଇ। C, ହେଉଛି Aର ମା। D, ହେଉଛି Cର ପିତା। E, ହେଉଛି Bର ପୁଅ। ତାହେଲେ D, A ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Son/ପୁଅ
(b) Grandson/ନାତି
(c) Grandfather/ଦାଦା
(d) Great Grandfather/ପରଦାଦା
Answer: (c) Grandfather/ଦାଦା

A is the mother of B. C is the son of A. D is the brother of E. E is the daughter of B. Who is the grandmother of D?
A, ହେଉଛି Bର ମା। C, ହେଉଛି Aର ପୁଅ। D, ହେଉଛି Eର ଭାଇ। E, ହେଉଛି Bର ଝିଅ। ତାହେଲେ D ର ମାମାମା କିଏ?
(a) A
(b) B
(c) C
(d) D
Answer: (b) B

A is D's brother. D is B's father. B and C are sisters. How is A related to C?
A, ହେଉଛି Dର ଭାଇ। D, ହେଉଛି Bର ପିତା। B ଓ C ହେଉଛନ୍ତି ଭଉଣୀ। ତାହେଲେ A, C ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Son/ପୁଅ
(b) Grandson/ନାତି
(c) Father/ପିତା
(d) Uncle/ମାମା
Answer: (d) Uncle/ମାମା

A is B's sister. C is B's mother. D is C's father. E is D's mother. Then how is A related to D?
A, ହେଉଛି Bର ଭଉଣୀ। C, ହେଉଛି Bର ମା। D, ହେଉଛି Cର ପିତା। E, ହେଉଛି Dର ମା। ତାହେଲେ A, D ସହ କିପରି ସମ୍ବନ୍ଧିତ?
(a) Grandfather/ଦାଦା
(b) Daughter/ଝିଅ
(c) Grandmother/ଦାଦୀ
(d) Granddaughter/ନାତିଣୀ
Answer: (d) Granddaughter/ନାତିଣୀ

F is the brother of A. C is the daughter of A. K is the sister of F. G is the brother of C. Who is the uncle of G?
F, ହେଉଛି Aର ଭାଇ। C, ହେଉଛି Aର ଝିଅ। K, ହେଉଛି Fର ଭଉଣୀ। G, ହେଉଛି Cର ଭାଇ। ତାହେଲେ Gର ମାମା କିଏ?
(a) A

to Vishal? Vinod, Vishalକୁ ପରିଚୟ ଦେଉଛି ଯିଏ “ମୋର ବାପାଙ୍କର ସ୍ୱାମୀଙ୍କର ସେଇ ଏକମାତ୍ର ଭାଇର ପୁଅ।” Vinod, Vishal ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Cousin/ଭାଇ ଭଉଣୀ

(b) Son/ପୁଅ

(c) Brother/ଭାଇ

(d) Uncle/କକା

Answer: (a) Cousin/ଭାଇ ଭଉଣୀ

Among her children, Ganga’s favourites are Ram and Rekha. Rekha is the mother of Sharat, who is loved most by his uncle Mithun. The head of the family is Ram Lal, who is succeeded by his sons Gopal and Mohan. Gopal and Ganga have been married for 35 years and have 3 children. What is the relation between Mithun and Mohan? Gangaର ସହ ତାଙ୍କର ପୁଅମାନେ Ram ଓ Rekha ପ୍ରିୟ। Rekha, Sharatଙ୍କର ମାଆ, ଯାହାକୁ ସେଇ ପରିବାରର Mithun ପ୍ରିୟ। ପରିବାରର ମୁଖ୍ୟ, Ram Lal, ଯିଏ ତାଙ୍କର ପୁଅମାନେ Gopal ଓ Mohan ସହ ଏହି ପରିବାର ଚାଲାନ୍ତି। Gopal ଓ Ganga 35 ବର୍ଷ ଧରି ବିବାହିତ ଓ ତିନି ପୁଅମାନେ ଥିବାରୁ, Mithun ଓ Mohan ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Uncle/କକା

(b) Son/ପୁଅ

(c) Brother/ଭାଇ

(d) No relation/କୌଣସି ସମ୍ବନ୍ଧ ନାହିଁ

Answer: (a) Uncle/କକା

Rahul and Robin are brothers. Pramod is Robin’s father. Sheela is Pramod’s sister. Prema is Pramod’s niece. Shubha is Sheela’s granddaughter. How is Rahul related to Shubha? Rahul ଓ Robin ଭାଇ। Pramod, Robinଙ୍କର ପିତା। Sheela, Pramodଙ୍କର ବୋନ୍। Prema, Pramodଙ୍କର ପୋତି। Shubha, Sheelaଙ୍କର ପୋତି। Rahul, Shubha ସହ କିପରି ସମ୍ବନ୍ଧିତ?

(a) Brother/ଭାଇ

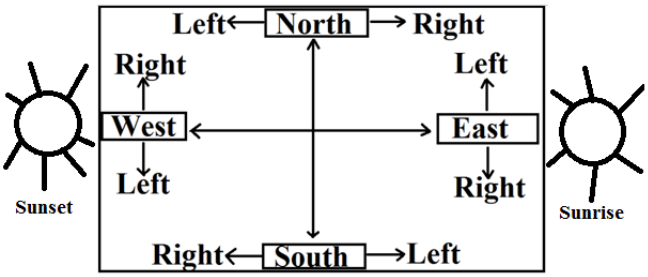
(b) Cousin/ଭାଇ ଭଉଣୀ

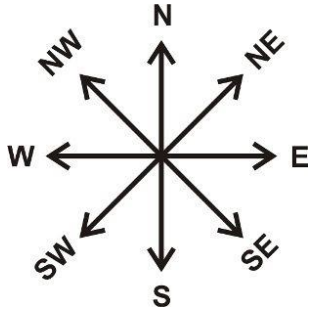
(c) Uncle/କକା

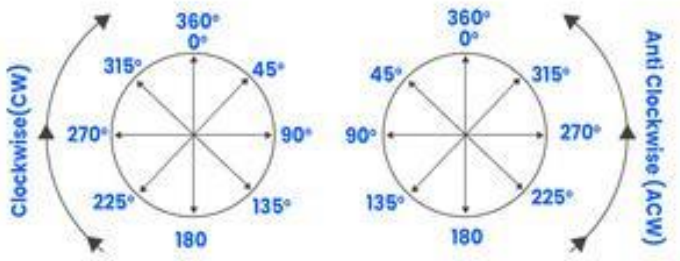
(d) Nephew/ପୋତା

Answer: (c) Uncle/କକା

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
  - Right = South
- If facing West:
  - Left = South
  - 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 km\text{d} = \sqrt{(6^2 + 8^2)} = \sqrt{(36 + 64)} = \sqrt{100} = 10 \, kmd=(62+82)=(36+64)=100=10km.

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
- North-East ↔ South-West
- North-West ↔ South-East

8. Practice Common Scenarios

Here are some common movement scenarios with their direction changes:

ଯାଉଛି, ପରେ ବାମକୁ ମୋଡି 5 କି.ମି. ଯାଉଛି। ସେ ତାଙ୍କର ଆରମ୍ଭ ସ୍ଥାନରୁ କେତେ କି.ମି. ଦୂରରେ ଅଛନ୍ତି?

(a) 3 km / 3 କି.ମି.

(b) 5 km / 5 କି.ମି.

(c) 6 km / 6 କି.ମି.

(d) 7 km / 7 କି.ମି.

Ans: (b) 5 km / 5 କି.ମି.

 Amit walked 30 meters towards East, took a right turn and walked 40 meters. Then he took a left turn and walked 30 meters. In which direction is he now from the starting point?

ଏମିତ 30 ମିଟର ଦୂରତାକୁ ପୂର୍ବ କୁ ଚାଲିଲେ, ଦାହିଣକୁ ମୋଡି 40 ମିଟର ଚାଲିଲେ। ପରେ ସେ ବାମକୁ ମୋଡି 30 ମିଟର ଚାଲିଲେ। ସେ କେତେ ଦୂରରେ ଅଛନ୍ତି?

(a) North-East / ଉତ୍ତର-ପୂବ

(b) East / ପୂବ

(c) South-East / ଦକ୍ଷିଣ-ପୂବ

(d) South / ଦକ୍ଷିଣ

Ans: (c) South-East / ଦକ୍ଷିଣ-ପୂବ

 Kunal walks 10 kilometers towards North. From there, he walks 6 kilometers towards South. Then, he walks 3 kilometers towards East. How far and in which direction is he with reference to his starting point?

କୁନାଲ 10 କି.ମି. ଉତ୍ତରକୁ ଚାଲି। ସେଉଁଠାରୁ ସେ 6 କି.ମି. ଦକ୍ଷିଣକୁ ଯାଉଛି। ପରେ ସେ 3 କି.ମି. ପୂବକୁ ଯାଉଛି। ସେ ତାଙ୍କର ଆରମ୍ଭ ସ୍ଥାନରୁ କେତେ କି.ମି. ଦୂରରେ ଅଛନ୍ତି?

(a) 5 kilometers West / 5 କି.ମି. ପଶ୍ଚିମ

(b) 5 kilometers North-east / 5 କି.ମି. ଉତ୍ତର-ପୂବ

(c) 7 kilometers East / 7 କି.ମି. ପୂବ

(d) 7 kilometers West / 7 କି.ମି. ପଶ୍ଚିମ

Ans: (b) 5 kilometers North-east / 5 କି.ମି. ଉତ୍ତର-ପୂବ

 A man is standing facing the sun. He goes straight for 5 m, takes a left turn to travel 7 m, takes another left to travel 6 m, and finally takes a left turn to travel 8 m and stops. In which direction is he with respect to the starting point?

ଏକ ପୁରୁଷ ସୂର୍ଯ୍ୟଙ୍କୁ ମୁହାଁ ଦେଇ ଦାଣ୍ଡିରେ ଅଛି। ସେ 5 ମିଟର ସିଧା ଚାଲି, 7 ମିଟର ପାଇଁ ବାମକୁ ମୋଡି, 6 ମିଟର ପାଇଁ ଆଉ ଏକ ବାମକୁ ମୋଡି, ଶେଷରେ 8 ମିଟର ମୋଡି ଥିବା ସ୍ଥାନରେ ଥ stops। ସେ କେଉଁଠି ଅଛି?

(a) South / ଦକ୍ଷିଣ

(b) West / ପଶ୍ଚିମ

(c) Northeast / ଉତ୍ତର-ପୂବ

(d) Southwest / ଦକ୍ଷିଣ-ପଶ୍ଚିମ

Ans: (c) Northeast / ଉତ୍ତର-ପୂବ

 I am facing West. I turn 45° in the clockwise direction and then 180° in the same direction and then 270° anti-clockwise. Which direction am I facing now?

ମୁଁ ପଶ୍ଚିମକୁ ମୁହାଁ ଦେଇଛି। ମୁଁ 45° ଘଡିଆ ଦିଗରେ ମୋଡି 180° ସେଇ ଦିଗରେ ମୋଡି ଆଉ 270° ବାମକୁ ମୋଡି। ବର୍ତ୍ତମାନ କେଉଁଠି ମୁଁ ମୁହାଁ ଦେଇଛି?

(a) South-West / ଦକ୍ଷିଣ-ପଶ୍ଚିମ

(b) South / ଦକ୍ଷିଣ

(c) West / ପଶ୍ଚିମ

(d) North-West / ଉତ୍ତର-ପଶ୍ଚିମ

Ans: (b) South / ଦକ୍ଷିଣ

 Amar on his new car 1st drives towards North 4 Kms and turns right and drives 5 Kms. Then he turns towards South and drives 2 Kms, then he takes a right turn and drives 6 Kms. What is the distance of Amar from his starting point?

ଅମର ତାଙ୍କର ନୂତନ କାରରେ 4 କି.ମି. ଉତ୍ତରକୁ ଯାଆନ୍ତି ଏବଂ ଦାହିଣକୁ ମୋଡି 5 କି.ମି. ଯାଆନ୍ତି। ପରେ ସେ ଦକ୍ଷିଣକୁ ମୋଡି 2 କି.ମି. ଯାଆନ୍ତି, ଏବଂ ତାଙ୍କର ପୁଣି ଦାହିଣକୁ ମୋଡି 6 କି.ମି. ଯାଆନ୍ତି। ଅମରର ଆରମ୍ଭ ସ୍ଥାନରୁ କେତେ ଦୂରରେ ଅଛନ୍ତି?

(a) 16 Kms / 16 କି.ମି.

(b) 12 Kms / 12 କି.ମି.

(c) 2 Kms / 2 କି.ମି.

(d) √4 Kms / √4 କି.ମି.

Ans: (b) 12 Kms / 12 କି.ମି.

 Ram leaves his house and walks 12 km north. He turns to the right and walks 12 km. He again turns to the right and walks another 12 km and then turns 5 km to the left. How far is he from his house and in which direction?

ରାମ ତାଙ୍କର ବାସାରୁ 12 କି.ମି. ଉତ୍ତରକୁ ଚାଲନ୍ତି। ସେ ଦାହିଣକୁ ମୋଡି

wrote

14) Find Water Image

N4tQj3

15) Find Water Image

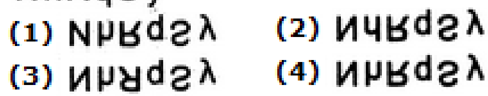
D6Z7F4

16) Find Water Image

BK50RP62

17) Find Water Image

NhRqSy



18) Find water image

US91Q4M5W3

19) Find Water Image

FAMILY

20) Find Water Image

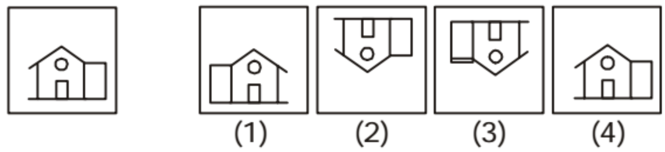
96FSH52

21) Find Water Image

rise

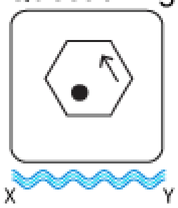
22) Find water image

Question Figure : **Answer Figures :**

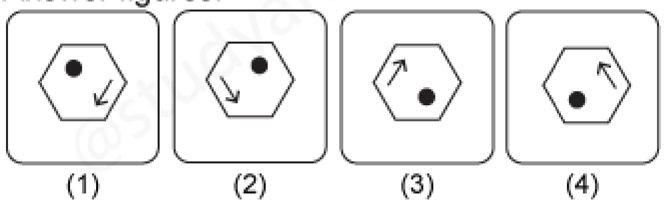


23) Find water image

Question figure:

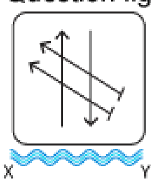


Answer figures:

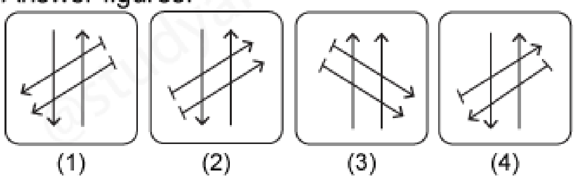


24) Find water image

Question figure:

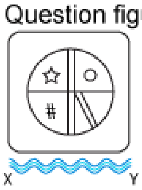


Answer figures:

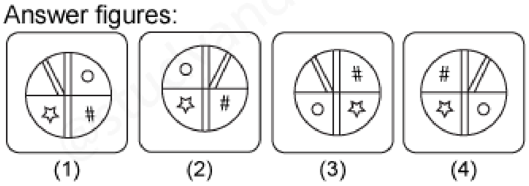


25) Find water image

Question figure:

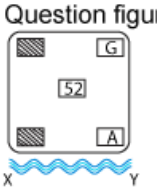


Answer figures:

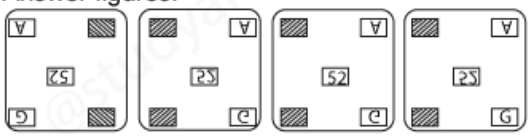


26) Find water image

Question figure:



Answer figures:

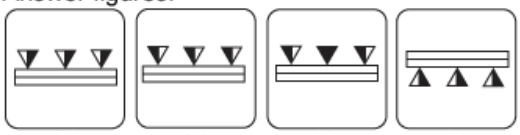


(1) (2) (3) (4)

27) Find water image

Question figure:

Answer figures:

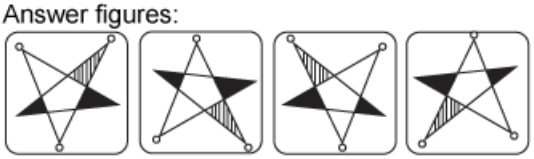


(1) (2) (3) (4)

28) Find water image

Question figure:

Answer figures:

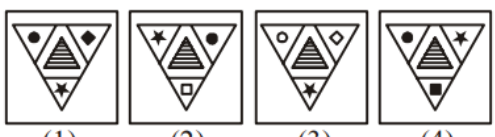


(1) (2) (3) (4)

29) Find water image

Question Figure :

Answer Figures :

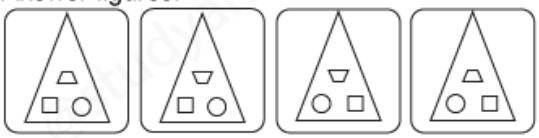


(1) (2) (3) (4)

30) Find water image

Question figure:

Answer figures:



(1) (2) (3) (4)

----------*----------

1	2	3	4	5	6	7	8	9	10
C	D	A	C	D	B	B	D	B	A
11	12	13	14	15	16	17	18	19	20
D	B	B	A	C	B	D	D	D	C
21	22	23	24	25	26	27	28	29	30
A	B	A	A	D	B	B	C	D	D

----------*----------

CODING AND DECODING

1) In a certain code language STUDENT is written as TUTDNES. How will SOURCES be written in that code language?

A) SOURCES B) SUORECS

C) SRUOCES D) SOURSEC

Answer – B

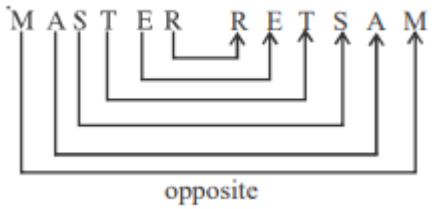
Explanation:

- There are 7 letters in the word
- The middle letter has been left intact
- The first and the last letters of the word have interchanged their position. Similarly, the second and the third letters and the fifth and sixth letters have interchanged their position.

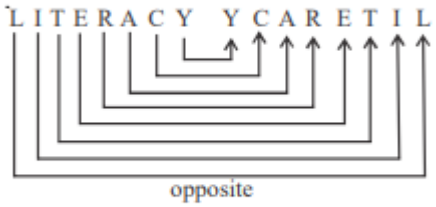
2) In a certain code language, “MASTER” is written as “RETSAM”. How is “LITERACY” written in that code language?

(a) ETICRACY (b) YCARETIL

(c) YARCETIC (d) ETICYACR

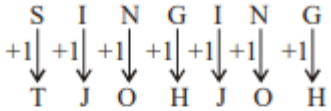


MASTER→ RETSAM
Similarly,

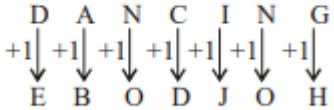


LITERACY→ YCARETIL
Finally, 'LITERACY' is written as 'YCARETIL'.

3) In a certain code language, "SINGING" is written as "TJOHJOH". How is "DANCING" written in that code language?
(a) EBODJOH (b) EBOSTEO
(c) EBDOJHO (d) EDBOJHO
Answer - A



Similarly,



Finally, 'DANCING' is written as EBODJOH.

4) In a certain code language, "ENERGETIC" is written as "ETICGENER". How is "CARTRIDGE" written in that code language?
(a) IDGESCART
(b) IDGERCRAT
(c) IDEGRCART
(d) IDGERCART
Answer - D

Similarly,

Finally, 'CARTRIDGE' is written as 'IDGERCART' in code language.

5) In a certain code language, "OCEAN" is written as "PEHES". How is "RIVER" written in that code language?
(a) SKIYW (b) SKYIW
(c) SKYIV (d) SKYEV
Answer - B

OP $\xrightarrow{+1}$ Similarly, RS $\xrightarrow{+1}$
CE $\xrightarrow{+2}$ IK $\xrightarrow{+2}$
EH $\xrightarrow{+3}$ VY $\xrightarrow{+3}$
AE $\xrightarrow{+4}$ EI $\xrightarrow{+4}$
NS $\xrightarrow{+5}$ RW $\xrightarrow{+5}$

Finally, 'RIVER' will be written as 'SKYIW'.

6) In a certain code language, "EXCITED" is written "DETICXE". How is "KINLEY" written in that code language?
(a) YELNIK (b) NIKLEY
(c) NIKYEL (d) LJOMFZ
Ans. (a)

7) In a certain code language, "DIAMOND" is written as "4895064" and "GAME" is written as "7953". How is "MANGO" written in that code language ?
(a) 59670 (b) 59607
(c) 56970 (d) 59671
Ans. (a)

8) In a certain code language, "DONKEY" is written as "YEKNOD". How is "RAINBOW" written in that code language?
(a) WOBNAIR (b) WOBNIAR
(c) WONBAIR (d) WOBNRAI
Ans. (b)

9) In a certain code language, “BORROW” is written as “769965” and “BOMB” is written as “7647”. How is “WOMB” written in that code language?
(a) 5647 (b) 5467
(c) 5677 (d) 5776
Ans. (a)

10) In a certain code language, “RIVER” is written as “12351” and “RED” is written as “156”. How is “DRIVER” written in that code language?
(a) 612311 (b) 612531
(c) 621351 (d) 612351
Ans. (d)

If D = 4 and READ is coded as 7, then what is HEAR coded as?
ଯଦି D = 4 ଓ READ 7 ଭାବେ କୋଡ୍ ହୋଇଛି, ତେବେ HEAR କିପରି କୋଡ୍ ହୋଇଛି?
(a) 32 / 32
(b) 33 / 33
(c) 7 / 7
(d) 8 / 8
Answer / ଉତ୍ତର: (b) 33 / 33

If A is coded as 2, B as 3, and so on, what is the code for FACE?
ଯଦି A = 2, B = 3 ଓ ଏହି ପରି ଆଗକୁ ଯାଉଛି, ତେବେ FACE ପାଇଁ କୋଡ୍ କେଉଁଟି?
(a) 7246 / 7246
(b) 6245 / 6245
(c) 6357 / 6357
(d) 7346 / 7346
Answer / ଉତ୍ତର: (b) 6245 / 6245

If J = 10, JASMINE = 71, then ESTIMATE = ?
ଯଦି J = 10 ଓ JASMINE = 71, ତେବେ ESTIMATE କେଉଁଟି?
(a) 71 / 71
(b) 82 / 82
(c) 92 / 92
(d) 91 / 91
Answer / ଉତ୍ତର: (b) 82 / 82

If A = 1, CAT = 24, then POLICE = ?
ଯଦି A = 1 ଓ CAT = 24, ତେବେ POLICE କେଉଁଟି?
(a) 57 / 57
(b) 60 / 60
(c) 62 / 62
(d) 59 / 59
Answer / ଉତ୍ତର: (c) 62 / 62

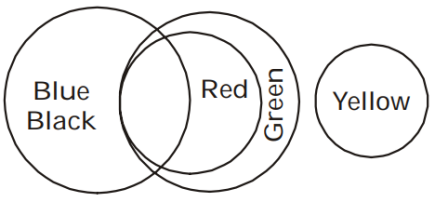
If A = 1; AND = 19, then BAT = ?
ଯଦି A = 1 ଓ AND = 19, ତେବେ BAT କେଉଁଟି?
(a) 22 / 22
(b) 23 / 23
(c) 21 / 21
(d) 20 / 20
Answer / ଉତ୍ତର: (c) 21 / 21

If B = 2, MAT = 34, then JO GLEX = ?
ଯଦି B = 2 ଓ MAT = 34, ତେବେ JO GLEX କିପରି ହେବ?
(a) 70 / 70
(b) 71 / 71
(c) 72 / 72
(d) 73 / 73
Answer / ଉତ୍ତର: (c) 72 / 72

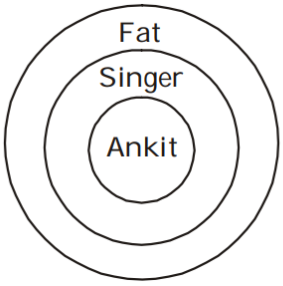
If C = 3 and CAT = 24, what is FAULT?
ଯଦି C = 3 ଓ CAT = 24, ତେବେ FAULT କିପରି କୋଡ୍ ହେବ?
(a) 60 / 60
(b) 57 / 57
(c) 64 / 64
(d) 72 / 72
Answer / ଉତ୍ତର: (b) 57 / 57

If ‘EXPANSION’ is written as 248537693, in a certain code, how would ‘PENSION’ be written in that code?
ଯଦି ‘EXPANSION’ 248537693 ଭାବେ ଏକ କୋଡ୍ ମଧ୍ୟମରେ ଲିଖାଯାଉଛି, ତେବେ ‘PENSION’ କେମିତି ଲିଖାଯିବ?
(a) 8236793 / 8236793
(b) 8237639 / 8237639
(c) 8237693 / 8237693
(d) 8233769 / 8233769
Answer / ଉତ୍ତର: (c) 8237693 / 8237693

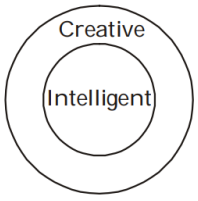
If the letters in ‘PRABA’ are coded as 27595 and ‘THILAK’ are coded 368451, how can ‘BHARATHI’ be coded?ଯଦି ‘PRABA’ ରେ ଅକ୍ଷରଗୁଡିକୁ 27595 ଭାବେ କୋଡ୍



6) Statement
I : Ankit is a singer.
II : All the singers are fat.
Conclusions :
I. Ankit is fat.
II. All fat men are singers.
III. Fat men are not singers.
IV. Ankit is not fat.
(a) Only Conclusion I follows.
(b) Only Conclusion II follows.
(c) Only Conclusion III follows.
(d) Only Conclusion IV follows
Answer- (a) All the singers are fat and Ankit is a singer. So, Ankit is fat.

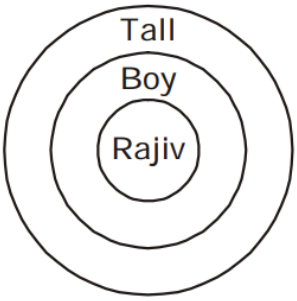


7) Statements : All intelligent people are creative.
Conclusion I : Some creative people are intelligent.
Conclusion II : All intelligent people are creative.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Either Conclusion I or II follows
(d) Both Conclusions I and II follow
Venn diagram :



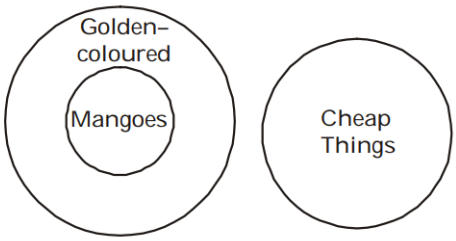
Answer- (d)

8) Statements :
All boys are tall.
Rajiv is a boy.
Conclusions :
I. Rajiv is tall.
II. Rajiv is not tall.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Both Conclusion I and Conclusion II follow
(d) Neither Conclusion I nor Conclusion II follows



Answer – A

9) Statements :
1. All mangoes are golden in colour.
2. No golden coloured things are cheap.
Conclusions :
I. All mangoes are cheap.
II. Golden–coloured mangoes are not cheap.
(a) Only Conclusion I follows
(b) Only Conclusion II follows
(c) Either Conclusion I or Conclusion II follows
(d) Both Conclusions I and II follow



Answer – B

10) Statements :
(I) No women can vote.
(II) Some women are politicians.
Conclusions:
(I) Male politicians can vote.
(II) Some politicians can vote.
(a) Conclusion I follow
(b) Conclusion II follows
(c) Neither I nor II follows
(d) Both I and II follow
Answer – C

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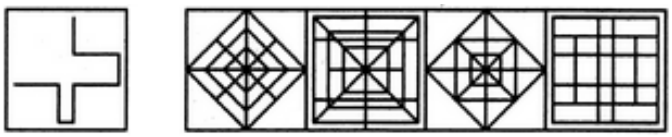
Embedded Figure

Find Correct Embedded Figure questions

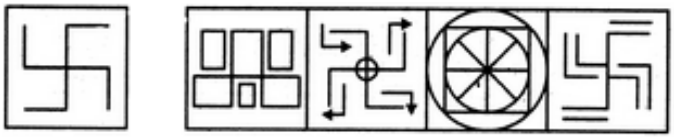


Answer – d

2) Find correct Embedded Figure

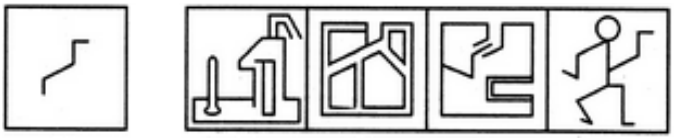
Answer – D

3) Find correct



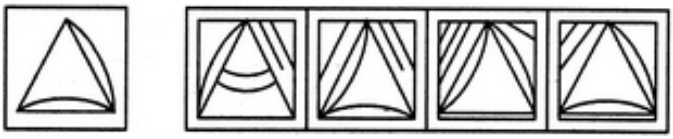
Answer – C

4) Find correct



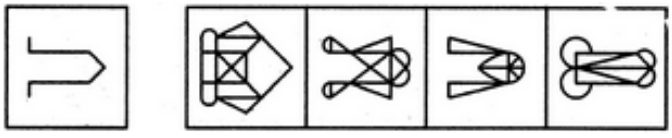
Answer – D

5) Find correct



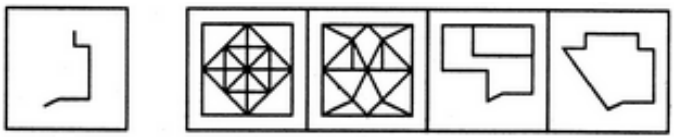
Answer – D

6) Find correct



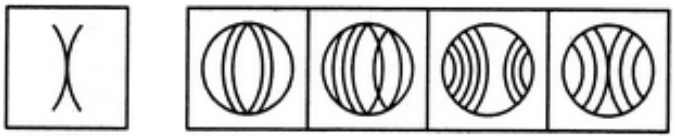
Answer – B

7) Find correct



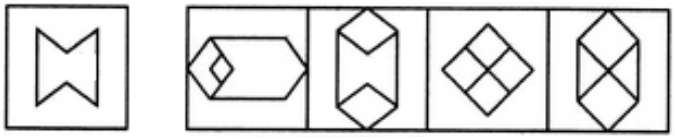
Answer – D

8) Find correct



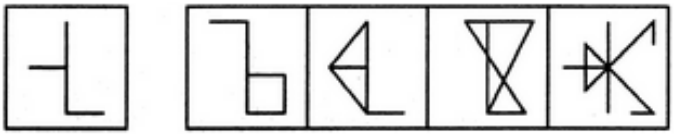
Answer – D

9) Find correct



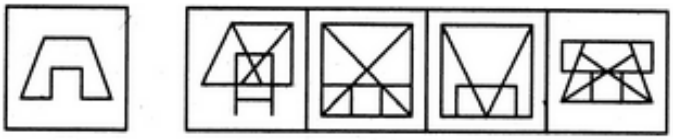
Answer – B

10) Find correct



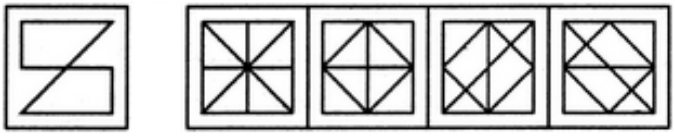
Answer – B

11) Find correct



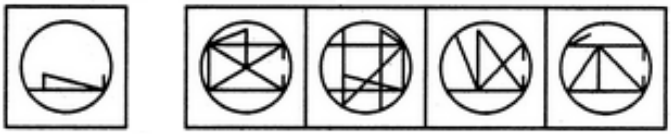
Answer – C

12) Find correct



Answer – C

13) Find correct



Answer – B

14) Find correct