

Q1. (a) Define CHN.

Refer to 2018 Q1 (a)

(B) Explain Community Health concept and dimension of Health.

Refer to 2018 Q1. (B)

(C) Discuss about promotion of health.

**:- Promotion of Health (7 Marks)**

**Definition:**

**Health promotion** refers to the **process of enabling people to improve their health and well-being** by adopting healthy behaviours and preventing diseases. It involves **education, policies, and community efforts** to create a healthier society.

**Key Aspects of Health Promotion:**

**1. Health Education** 📖

- Spreading awareness about **healthy habits, nutrition, hygiene, and disease prevention**.
- Example: Campaigns on **anti-smoking, balanced diet, and handwashing**.

**2. Preventive Healthcare** 🏥

- Encouraging **vaccination, early screening, and regular health check-ups**.
- Example: Immunization programs to prevent **measles, polio, and flu**.

**3. Healthy Lifestyle Promotion** 🏃

- Encouraging **exercise, balanced diet, and stress management**.
- Example: Promotion of **yoga, meditation, and fitness programs**.

**4. Environmental & Sanitation Measures** 🌍

- Ensuring **clean drinking water, pollution control, and proper waste disposal**.
- Example: Swachh Bharat Abhiyan (Clean India Campaign).

**5. Legislation & Policies** ⚖️

- Implementing laws for **tobacco control, alcohol restriction, and occupational health**.
- Example: **Ban on smoking in public places**.

**6. Community Participation** 🤝

- Engaging people in **health programs and self-care activities**.
- Example: Formation of **self-help groups and health clubs**.

## 7. Use of Mass Media 📺

- **Radio, TV, and social media** to spread health awareness.
- Example: Advertisements on **COVID-19 vaccination & sanitation**.

### Conclusion:

Health promotion is **essential for disease prevention and improving quality of life**. It requires **individual, community, and government efforts** to build a healthier society. ✅ 🌍

Q2. (a) Define the demography.

**:- Definition of Demography (2 Marks)**

**Demography** is the **scientific study of human populations**, focusing on their **size, structure, distribution, and changes over time** due to **birth, death, migration, and aging**.

It helps in **planning resources, policymaking, and understanding social and economic trends**.



(B) Explain Method of collection of demographic data.

**:- Methods of Collection of Demographic Data (8 Marks)**

Demographic data refers to **information about the population**, such as **age, gender, birth rate, death rate, migration, and socioeconomic factors**. The data is collected through various methods, which can be classified into two categories:

### 1. Primary Sources (Direct Collection Methods) 📊

These methods involve **collecting data directly from individuals** through surveys, censuses, or registrations.

#### A. Census Method 🏠

- A census is a **complete count of a country's population** at a specific time.
- Conducted **every 5 or 10 years** by the government.
- **Example:** Population Census of India (conducted every 10 years).
- **Advantages:** Provides accurate and detailed population data.
- **Disadvantages:** Expensive and time-consuming.

#### B. Vital Registration System (Civil Registration) 📄

- Records **births, deaths, marriages, and divorces** systematically.
- **Example:** Birth & death registration in hospitals or municipal offices.
- **Advantages:** Continuous and legal source of demographic data.
- **Disadvantages:** Incomplete in some rural or underdeveloped areas.

#### C. Sample Surveys 📋

- Data is collected from **a selected group of people** (sample) instead of the entire population.

- **Example:** National Family Health Survey (NFHS), Demographic and Health Surveys (DHS).
- **Advantages:** Less expensive and faster than a census.
- **Disadvantages:** May not represent the entire population accurately.

## 2. Secondary Sources (Indirect Collection Methods)

These methods use **already existing data** collected by other organizations or reports.



### A. Population Records & Reports

- Data collected from **school records, hospital records, tax records, and voter lists**.
- **Example:** Health department reports, WHO statistical data.
- **Advantages:** Readily available and cost-effective.
- **Disadvantages:** May not be updated regularly.

### B. International Publications

- Reports from **international organizations** like WHO, UN, World Bank, and UNESCO.
- **Example:** United Nations Population Reports.
- **Advantages:** Provides a **global comparison** of demographic trends.
- **Disadvantages:** May not focus on local or country-specific details.

### Conclusion:

The **combination of these methods** helps in gathering **accurate and reliable demographic data**, which is essential for **policy planning, resource distribution, and national development**.  


Q3. (a) Define Epidemiology.

### ***:- Definition of Epidemiology***

**Epidemiology** is the **study of the distribution and determinants of health-related events in populations** and the **application of this study to control diseases and health problems**. It helps in identifying **risk factors, causes, and preventive measures** for diseases.

### **Key Aspects of Epidemiology:**

- ✓ **Study of diseases in populations** (who, where, when).
- ✓ **Identification of causes and risk factors.**
- ✓ **Prevention and control of diseases.**
- ✓ **Application of findings in public health policies.**

 **Example:** Epidemiology helped in understanding and controlling **COVID-19, malaria, and cholera outbreaks**.

(B) Explain the aims and methods of Epidemiology.

### ***:- Aims and Methods of Epidemiology***

#### **Aims of Epidemiology**

Epidemiology plays a crucial role in **public health** by identifying disease patterns, risk factors, and ways to prevent health problems. The main aims include:

### 1. Identifying the Causes & Risk Factors of Diseases 🦠

- Understanding the **causes and transmission** of diseases.
- Example: Finding the link between **smoking and lung cancer**.

### 2. Measuring the Frequency & Distribution of Diseases 📊

- **Who** gets affected (age, gender, occupation).
- **Where** (urban vs. rural, country-specific).
- **When** (seasonal patterns, outbreaks).
- Example: Tracking **influenza outbreaks during winter**.

### 3. Preventing & Controlling Diseases 🚫

- Developing **strategies to prevent diseases**.
- Example: Vaccination programs for **measles and COVID-19**.

### 4. Evaluating Public Health Programs 🏥

- Checking the **effectiveness of health programs** and interventions.
- Example: Assessing the success of **malaria prevention campaigns**.

### 5. Guiding Health Policies & Resource Allocation 📋

- Providing **scientific evidence for health policies** and budgeting.
- Example: **Lockdowns and mask mandates** during COVID-19.

## Methods of Epidemiology

Epidemiologists use different methods to **study diseases and their impact on populations**:

### 1. Descriptive Epidemiology 📈

- Describes **who, where, and when** a disease occurs.
- Example: Number of **dengue cases in a city** over time.

### 2. Analytical Epidemiology 🔬

- Identifies **causes and risk factors** of diseases by comparing groups.
- **Case-Control Study** – Compares people with a disease to those without.
- **Cohort Study** – Follows a group over time to track disease development.
- Example: Studying **lung cancer in smokers vs. non-smokers**.

### 3. Experimental Epidemiology 🧪

- Involves **intervention trials** to test new treatments or prevention methods.
- Example: Testing a **new vaccine for COVID-19**.

#### 4. Surveillance & Monitoring Systems 🧐

- Continuous **collection, analysis, and interpretation** of health data.
- Example: **Real-time tracking of infectious diseases like Ebola**.

#### Conclusion:

Epidemiology is **essential for disease prevention, control, and health policy planning**. By using **descriptive, analytical, and experimental methods**, it helps in **understanding and managing public health issues effectively**. ✅🌍

(C) Describe the role of nurse in prevention of communicable disease.

#### **:- Role of Nurse in Prevention of Communicable Diseases**

Nurses play a **critical role** in the **prevention, control, and management** of communicable diseases by implementing **preventive measures, health education, and patient care**. Their role is essential at **individual, community, and hospital levels** to reduce the spread of infections.

#### 1. Health Education & Awareness 📄

- Educate individuals and communities about **causes, symptoms, and transmission** of diseases.
- Promote **personal hygiene, handwashing, and sanitation**.
- Example: Educating people on **preventing malaria by using mosquito nets**.

#### 2. Immunization & Vaccination 💉

- Administer vaccines to prevent infectious diseases.
- Participate in **mass immunization programs**.
- Example: **Polio, Measles, COVID-19 vaccination campaigns**.

#### 3. Early Detection & Surveillance 🔬

- Identify early signs of infections through **screening & monitoring**.
- Report disease outbreaks to **health authorities**.
- Example: **Tracking tuberculosis (TB) cases** in communities.

#### 4. Infection Control in Healthcare Settings 🏥

- Follow **infection control protocols** (hand hygiene, PPE use, sterilization).
- Prevent **hospital-acquired infections (HAIs)**.
- Example: **Using gloves, masks, and disinfecting surfaces** in hospitals.

#### 5. Isolation & Quarantine Measures 🚫

- Isolate patients with contagious diseases to prevent spread.
- Ensure **proper disposal of infectious waste**.
- Example: Managing isolation wards for **COVID-19 or tuberculosis patients**.

## 6. Community Outreach & Home-Based Care 🏠

- Provide care to patients at home to **reduce hospital overcrowding**.
- Support and educate families on **infection prevention at home**.
- Example: Home-based care for **HIV/AIDS or flu patients**.

## 7. Coordination with Health Authorities & NGOs 🌐

- Work with **government & health organizations** to implement disease prevention programs.
- Participate in **awareness campaigns, vaccination drives, and outbreak responses**.
- Example: Collaboration with WHO & UNICEF for **global immunization programs**.

### Conclusion:

Nurses are **frontline warriors** in preventing communicable diseases by **educating, vaccinating, detecting, and controlling infections**. Their role is vital in **reducing disease burden and protecting public health**. ✅ 🧑🏻 🌐

Q4. (a) Define Family planning.

**:- Definition of Family Planning (3 Marks)**

**Family Planning** refers to the **practice of controlling the number and spacing of children** through the use of **contraceptive methods, fertility awareness, and reproductive health services**. It helps individuals and couples to **plan pregnancies according to their health, financial, and personal preferences**.

### Key Aspects of Family Planning:

- ✓ **Prevention of unwanted pregnancies.**
- ✓ **Use of contraceptive methods (e.g., pills, condoms, IUDs, sterilization).**
- ✓ **Promotes maternal and child health.**

**Example:** Using **contraceptives** to space pregnancies and reduce maternal health risks. ✅

(B) Discuss about small family norms.

**:- Small Family Norms**

### Definition:

Small family norms refer to the **practice of limiting the number of children in a family** to ensure better health, financial stability, and overall well-being of the family and society. It promotes the concept of **“Two-Child Policy”** or **“Small Family, Happy Family.”**

### Importance of Small Family Norms:

### 1. Better Health & Well-being 🏠

- Reduces maternal and child mortality rates.
- Ensures **better nutrition and healthcare** for children.

### 2. Economic Stability 💰

- Less financial burden on families.
- Parents can **invest more in education and future planning**.

### 3. Improved Quality of Life 🏡

- More time and resources for **each child's upbringing**.
- Less stress for parents in managing family needs.

### 4. Women's Empowerment 👩

- Reduces **health risks associated with frequent childbirth**.
- Gives women opportunities for **education, employment, and self-growth**.

### 5. Control Overpopulation 🌍

- Helps in reducing **strain on natural resources**.
- Ensures **sustainable development** for future generations.

#### Government Initiatives Promoting Small Family Norms:

- **Family Planning Programs** (Use of contraceptives).
- **Incentives for Small Families** (Tax benefits, free education).
- **Public Awareness Campaigns** (Posters, TV ads promoting small families).

#### Conclusion:

Small family norms **promote a healthier, wealthier, and happier society** by ensuring **better care for children, economic stability, and controlled population growth**. Adopting these norms is essential for a **sustainable future**. ✅ 👨‍👩‍👧‍👦

(C) Describe methods of family planning.

#### :- Methods of Family Planning

Family planning methods help individuals and couples to **control the number and timing of pregnancies**. These methods can be classified into **natural, temporary, and permanent methods**.

#### 1. Natural Methods 🌿 (No use of medical devices or drugs)

✅ **Safe, cost-free, and hormone-free** but requires discipline and accuracy.

##### A. Rhythm (Calendar) Method 📅

- Avoiding unprotected sex during a woman's **fertile days** (ovulation period).

- **Advantage:** No side effects.
- **Disadvantage:** Not reliable for women with irregular cycles.

## B. Withdrawal Method (Coitus Interruptus) 🚫

- The male partner **withdraws before ejaculation**.
- **Advantage:** No cost, no medical intervention.
- **Disadvantage:** High failure rate due to **pre-ejaculation sperm**.

## C. Lactational Amenorrhea Method (LAM) 🍼

- **Breastfeeding suppresses ovulation** for up to 6 months after childbirth.
- **Advantage:** Natural and beneficial for the baby.
- **Disadvantage:** Only effective if periods have not resumed.

## 2. Temporary Methods 📅 (Prevent pregnancy for a specific period)

### A. Barrier Methods 🚫 (Prevent sperm from reaching the egg)

1. **Male Condoms** – A latex sheath worn over the penis.
  - ✅ **Prevents STIs & HIV.**
  - ❌ May break or slip.
2. **Female Condoms** – A pouch inserted into the vagina.
  - ✅ Empowers women to protect themselves.
  - ❌ Less effective than male condoms.
3. **Diaphragm & Cervical Cap** – Devices that block sperm entry.
  - ✅ Reusable.
  - ❌ Needs correct insertion & spermicide use.

### B. Hormonal Methods 💊 (Regulate hormones to prevent ovulation)

1. **Oral Contraceptive Pills (OCPs)** – Contain estrogen & progesterone.
  - ✅ Highly effective when taken regularly.
  - ❌ May cause nausea, weight gain, or mood changes.
2. **Emergency Contraceptive Pills (ECPs) – "Morning-After Pills"**
  - ✅ Can prevent pregnancy **after unprotected sex**.
  - ❌ Not for regular use & may cause irregular bleeding.
3. **Injectable Contraceptives** – Hormonal injection (every 1-3 months).
  - ✅ Long-lasting & private.

- ❌ May cause delayed return of fertility.

#### 4. **Implants (Under-Skin Rods)** – Small rods inserted under the skin.

- ✅ Works for 3-5 years.
- ❌ Requires a healthcare professional for insertion/removal.

### C. Intrauterine Devices (IUDs) 🌀 (Inserted into the uterus)

#### 1. **Copper-T (Non-Hormonal IUD)** – Prevents sperm from fertilizing the egg.

- ✅ Works for **up to 10 years**.
- ❌ May cause heavier periods & cramps.

#### 2. **Hormonal IUDs** – Release hormones to thin the uterus lining.

- ✅ Lighter periods & effective for **3-5 years**.
- ❌ Requires medical insertion.

### 3. **Permanent Methods (Surgical)** 🪚 (For couples who do not want more children)

#### A. **Tubal Ligation (Female Sterilization)** 🧑

- **Fallopian tubes are cut or blocked** to prevent eggs from reaching sperm.
- ✅ Permanent & highly effective.
- ❌ Requires surgery, not easily reversible.

#### B. **Vasectomy (Male Sterilization)** 🧑

- **Sperm-carrying tubes are cut** to prevent sperm from mixing with semen.
- ✅ **Simple, outpatient procedure** with a short recovery.
- ❌ Permanent & requires a few months for full effect.

### Conclusion:

Family planning methods provide **safe, effective, and flexible options** for preventing pregnancy. The choice depends on **health, convenience, and family goals**. ✅ 🧑 🚫

Q5. Write short notes:-

(A) Women Empowerment.

Refer 2019 Q5 (4D)

(B) Population Explosion

Refer to 2019 Q3.

(C) Qualities of Community Health Nurse.

**:- Qualities of a Community Health Nurse (5 Marks)**

A **Community Health Nurse (CHN)** plays a crucial role in promoting public health, preventing diseases, and improving the well-being of individuals and communities. To be effective, a CHN must possess the following qualities:

### 1. Good Communication Skills 🗣️

- Ability to **educate, counsel, and interact** with diverse populations.
- Uses **clear, simple language** to explain health concepts.

### 2. Empathy & Compassion ❤️

- Understands the **needs and feelings** of patients and communities.
- Provides **emotional support and care** to individuals.

### 3. Problem-Solving & Critical Thinking 🧠

- Quickly assesses **health problems** and finds effective solutions.
- Adapts to **emergency situations** like disease outbreaks.

### 4. Cultural Competency 🌍

- Respects **cultural beliefs and practices** of different communities.
- Provides **healthcare without discrimination**.

### 5. Leadership & Teamwork 👥

- Works with **health teams, NGOs, and government agencies**.
- Leads **health campaigns, vaccination drives, and awareness programs**.

### Conclusion:

A Community Health Nurse must be **skilled, compassionate, and adaptable** to address public health challenges and improve community well-being. ✅ 👥 🌍

(D) Disposal of waste.

Refer to 2020 Q4. (c)

(E) Environment Sanitation.

**:- Environment Sanitation (5 Marks)**

### Definition:

**Environmental sanitation** refers to the **practices and measures taken to improve and maintain cleanliness** in the surroundings to promote public health and prevent diseases. It includes **waste disposal, water purification, pollution control, and hygiene maintenance**.

### Key Aspects of Environmental Sanitation:

#### 1. Safe Water Supply 💧

- Ensuring access to **clean and safe drinking water**.

- Preventing **waterborne diseases like cholera and typhoid.**

## 2. Proper Waste Disposal 🗑️

- Efficient **solid and liquid waste management.**
- Recycling and **safe disposal of hazardous waste.**

## 3. Sewage & Drainage Management 🚰

- Proper treatment of **human and industrial waste.**
- Preventing **stagnant water to avoid mosquito breeding.**

## 4. Air & Noise Pollution Control 🌬️🔊

- Reducing **air pollutants from industries and vehicles.**
- Minimizing **noise pollution for a healthier environment.**

## 5. Personal & Community Hygiene 🧼

- Encouraging **handwashing, proper sanitation, and clean surroundings.**
- Preventing **vector-borne diseases like malaria and dengue.**

### Importance of Environmental Sanitation:

- ✓ **Prevents diseases** (Diarrhea, Malaria, Respiratory infections).
- ✓ **Promotes clean and healthy living conditions.**
- ✓ **Protects natural resources** (Water, Air, Soil).

### Conclusion:

Environmental sanitation is **essential for a disease-free, safe, and sustainable environment.**

Proper hygiene and waste management help in **improving public health and overall quality of life.**



(F) Food Preservation.

**:- Food Preservation (5 Marks)**

### Definition:

Food preservation refers to **techniques used to prevent food spoilage, extend shelf life, and maintain nutritional value** by controlling microbial growth, oxidation, and other spoilage factors.

### Methods of Food Preservation:

#### 1. Refrigeration & Freezing ❄️

- Slows down bacterial growth and keeps food fresh.
- Example: Storing milk, meat, and vegetables in the fridge.

#### 2. Drying & Dehydration 🌞

- Removes moisture to prevent microbial growth.

- Example: Dried fruits, powdered milk.

### 3. **Canning & Bottling** 🥫

- Seals food in airtight containers after heating.
- Example: Canned fish, jams, and pickles.

### 4. **Salting & Sugaring** 🧂 🍬

- Salt and sugar draw out moisture, preventing bacterial growth.
- Example: Salted fish, jams, and jellies.

### 5. **Pasteurization & Fermentation** 🥛 🧴

- Pasteurization: Heat treatment to kill pathogens (e.g., milk).
- Fermentation: Natural preservation using beneficial bacteria (e.g., yogurt, kimchi).

### **Importance of Food Preservation:**

- ✓ **Reduces food waste** and enhances food security.
- ✓ **Prevents foodborne illnesses.**
- ✓ **Maintains taste and nutrition** for a longer time.

### **Conclusion:**

Food preservation is essential for **safe storage, reducing wastage, and ensuring a stable food supply.** ✅ 🥗 🍷