

Pharma Unit



Social Pharmacy Top 15 Questions with Answers **According To PCI New Syllabus ER -2020**

Q.1) Define health and explain various indicators of health?

Ans. WHO Definition of health :- Health is a state of complete physical, mental, and social well-being and not merely an absence of disease or infirmity.

Health indicator is a characteristic or a variable which helps to measure the changes in the health of a society, community and the country.

Types of indicators

1) Mortality indicators

Mortality means death rate. Determining mortality rate in different age group in a community indicates the health status of society, community, and a country. For example, infant mortality rate, child mortality rate, disease specific mortality rate, crude death rate, maternal mortality rate

- Infant mortality rate :- it means how many new born babies(0 to 12 months) died out of 1000 new born babies.
- Child mortality rate :- it means how many numbers of children(1 to 4 years) died out of 1000 children.
- Disease specific mortality rate :- This is the mortality rate due to disease such as cancer, diabetes, and cardiovascular disease.
- Crude death rate :- how many peoples are died per 1000 population in one year.

Mortality indicators determine the life expectancy of an individual person in particular community and country. If mortality rate in a particular community and a country is low than we can say that the health status of that country or society or community is good.

2) Morbidity indicators

Morbidity indicators measure the occurrence of disease in a population in a particular country.

These indicators include following points

- Incidence of disease :- The number of new diseases in a particular population within specific period is called as incidence of disease. For example, incidents of corona are 5 per 100 persons in one year.
- Prevalence :- The total number of individuals who have disease at a particular time divided by population at risk of having disease is called as prevalence. For example, 200 peoples are corona positive per 10000 population
- Attendance rate at hospitals :- How many individuals are coming in a hospital for treatment of disease.

3) Disability indicator :- Disability indicators are the indicators which measures how many individuals are present in a population who are not recovered from a particular disease

For example, in a population of 1 lakh 20 thousand individuals are not recovered from corona.

4) Nutritional status indicator :- Nutritional status indicator is used to check the health of an individual in population. This indicator measures the weight and height of new born baby, weight and height of school children weight, height, and hemoglobin level of adults in a population.

5) Healthcare service indicator :- This indicator is used to check the availability of health services in particular population. This indicator measures number of doctors in population, number of hospital beds in a population, number of pharmacies in a population etc.

6) Socioeconomic indicator :- These indicators measure the growth of population, level of unemployment, literacy rate, mental health problem in a community. By measuring this health status of a community can be determined.

7) Quality of life indicators :- This indicator measures quality of life in a population. By measuring the quality-of-life health status country can be determined.

8) Environmental indicator :- These indicators measure environmental condition of a particular country by measuring water pollution, air pollution, noise pollution. By this the health status of country can be determine.

Q.2) Describe National Health policy?

Ans. National Health policy - Indian perspective

Health policy defines a vision for the future which helps to establish target and points for short and medium terms. Health policy of a nation is its strategy for controlling and optimising the social uses of its health knowledge for improving the health of population

The National Health policy of India is effective from 2017. Earlier National Health policies of India were also prepared in year 1983 and 2002. Due to increase in population pollution and new diseases Ministry of Health releases various health programs and policies to improve the health of common people.

The primary aim of National Health policy 2017 is to inform, clarify and prioritise the role of government in shaping health system in all its dimensions, investing in organization of health care services, prevention of disease and developing human resources, encouraging medical pluralism, developing better financial protection strategies, strengthening regulations and health assurance.

The main goal of National Health policy 2017 are as follow :-

- To bring down the mortality rate of children under five years from 29 to 23 per 1000 children.
- To bring the total fertility rate to 2.1
- To reduce the maternal mortality rate from 167 to 100 per thousand.
- To increase the life span from 67.5 to 70 years by 2025
- To increase the health expenditure from 1.51% of GDP to 2.5% by 2025
- To reduce the infant mortality rate from 34 to 28 per thousand population
- To reduce the neonatal mortality rate from 28 to 16 per thousand population
- To reduce the premature mortality rate from 25% such as heart disease respiratory disease by 25%
- National health policy 2017 also aims to achieve 90% of children born by or under the supervision of trained nurses and doctors
- To reduce the consumption of tobacco by 30%
- To eliminate leprosy and kala azar

National Health policy 2017 also promote the use of other medical system such as Ayurveda, yoga, unani, siddha and homeopathy under ministry of AYUSH. Yoga will be introduced much more widely in schools and workplaces as a part of promotion of good health.

Q.3 Define demography and write about demographic cycle?

Ans. Demography is the study of human populations which includes their size, composition and distribution across space and the process through which populations change.

Demographic cycle :- it has 5 stages

- a) First stage** :- It is also called as high stationary stage. It is characterised by high birth rate and high death rate which cancels each other
- b) Second stage** :- It is also called as early expanding stage. Here there is a decrease in death rate and the birth rate remains the same therefore the population expands
- c) Third stage** :- It is also called as low stationary stage. There is low birth rates and low death rates, so population becomes stationary
- d) Fourth stage** :- It is the declining stage. Here the population begins to decline as the birth rate is lower than the death rate
- e) Fifth stage** :- Population begins to decline as birth rate is lower than death rate. East European countries like Germany and Hungary are now in this stage

Q.4 Define family planning and its method?

Ans. Family planning means to plan and limit the size of the family in accordance with the social economic and health conditions so as to ensure that the family is happy both physically and mentally

Methods of family planning

A. Temporary method

- Natural method
 - Sexual abstinence method
 - Coitus interrupts
 - Safe Method
 - Basal body temperature method
 - Cervical mucus method
 - Prolonged lactation method
 - Vaginal washing method
- Spacing method
 - Barrier contraceptives (mechanical methods)
 - ✓ Condom
 - ✓ Diaphragm
 - ✓ Intrauterine devices
 - Chemical methods
 - ✓ Foam tablets
 - ✓ Contraceptive pills and jellies
 - ✓ Soluble tablets
 - ✓ Oral contraceptives

B. Permanent methods (sterilization method)

- a) Vasectomy (Male sterilization) :- In this method a piece of vas deferens of about 1cm length is removed
- b) Tubectomy (Female sterilization) :- It is a surgical process that blocks the fallopian tubes, thereby preventing the egg released by the ovary from reaching the uterus.

Q.5) Write about the role of pharmacist in public health?

Ans. Role of Pharmacist in public health

- 1) Review prescriptions :-** The pharmacist should review and handle prescription in a professional manner and be able to check for the completeness and correctness of the prescription. Also, if any clarification or correction is required in prescription the pharmacist should directly contact to prescribers/doctors.
- 2) Dispensing of prescription and non-prescription medicines :-** The pharmacist should be able to dispense various prescription drugs and medicines which is required to patient according to Drugs and cosmetic act. Also, the non-prescription drugs i.e., over the counter drugs should also be dispensed by the pharmacist very carefully.
- 3) Provide patient counselling :-** The pharmacist should be able to counsel the patient about the drugs and medicine which is used by the patient. Pharmacists should also give knowledge to the patient about their disease and the effect of their drug. Pharmacies should also give knowledge to the patient about how to use their medicine effectively.
- 4) Hospital pharmacy management :-** Pharmacist should be able to manage the drug distribution system in the hospital as per the policies of hospital pharmacy. Pharmacist should also check the requirement of medicines and drugs in the hospital pharmacy. Pharmacist should be able to take different challenges which are required to manage the hospital pharmacy.
- 5) Expertise on medications :-** The pharmacist should be able to provide an expert opinion on medication to health care professionals Such as doctors and nurses on safe and effective Use of medication.
- 6) Proficiency on pharmaceutical formulation :-** Pharmacist should be able to describe the chemistry, characteristic, types, advantage, and disadvantage of a drug used by the public
- 7) Deliver health care programmes :-** Pharmacies should arrange various healthcare programmes which include awareness about drugs, awareness about disease, awareness about public health, Awareness about hygiene, etc.
- 8) Recording incidents of a disease in their community :-** Pharmacist should be able to record the incidents of a disease occurring in their community. For example, Covid 19, Dengue, malaria, or any infectious disease.
- 9) Identifying adverse reaction of a drug :-** Pharmacy should be able to identify any adverse reaction or side effect of a drug which occurs to any patient in their surroundings.

Q.6) Explain different dimensions of health?

Ans. Dimensions of health :-

- 1) Physical health dimension :-** It means perfect functioning of body, it is the state in which every cell and organ are function properly. Some of the signs of good physical health in an individual are Normal weight, normal height, good appetite and clear breath etc. Many indicators are used to assess physical health such as normal blood pressure, normal pulse rate, normal respiratory rate, normal heart rate. All the sense organs such as eyes, nose, tongue and skin should be in normal condition and function properly.
- 2) Mental health dimension :-** It refers to the mind of an individual person. The mental health is as important as physical health. Mental health can be defined as a state of balance between an individual and surrounding world. Some of the characteristics of good mental health are -
 - A person should not have any internal disturbance.
 - A person should behaves good with the society.
 - A person should adjust with the environment and the surrounding world.
 - A person should face his own problem and solve the problem intelligently.
- 3) Social health dimension :-** Health is a function not only of medical care but of the overall development of the society. Social health means a state of harmony and integration within the individual between each individual and other members of society.
- 4) Spiritual dimension :-** Spiritual health dimension is related to the soul or spirit of an individual person. According to medical science the body and souls are two separate entities, spiritual health dimension is the connecting link between physical and mental health. Some of the spiritual techniques are yoga, meditation, etc.
- 5) Emotional dimension :-** This dimension is related to emotion of an individual, if the emotions are hurt person may develop depression anxiety or other psychological disturbance which results into bad health of an individual.
- 6) Vocational dimension :-** Vocation means occupation. If the occupation or any income source of an individual is disturb than the health of an individual is also disturbed.

Q. 7) Write about causative agent, symptoms, transmission and prevention and treatment of typhoid fever and chicken pox?

Ans.

Typhoid Fever :-

- **Causative agent :-** Typhoid fever is an illness caused by the bacterium Salmonella Typhi
- **Symptoms :-** The symptoms which appears in the first week of typhoid includes Nausea, vomiting, diarrhoea, Constipation, headache, sometimes cough and sore throat, slow and mild fever. In the second week the symptoms like high fever weakness, weight loss, Relative bradycardia and dehydration appears.

- **Mode of transmission :-** Typhoid is transmitted by the fecal oral or urine oral route. Typhoid fever is transmitted by this route directly through the hands contaminated with the faeces or urine of the patients or indirectly by consuming contaminated water, milk or other foods or through the house flies.
- **Prevention :-** The prevention includes good hygiene and sanitation. For the precautions, you must drink pure water i.e., either boiled or bottled water. avoid eating street foods. fruits should be washed thoroughly, and food should cook properly before eating. Every person should take vaccine for the prevention of typhoid fever.
- **Treatments :-** For the treatments several antibiotics are present. These antibiotics kill the bacteria. It takes a week to 10 days for the recovery with proper medications. The earliest drug is Chloramphenicol. Some common antibiotics are Azithromycin, Ceftriaxone, or Ciprofloxacin.

Chicken Pox

- **Causative agent :-** The disease is caused by a germ called varicella-zoster virus
- **Symptoms :-** Symptoms includes fever, sick feeling, Itch, red bumps filled with fluids and are easily recognized as chickenpox. rash on the head, face and trunk, skin blisters these blisters may appear anywhere there is skin, even inside the mouth, throat or vagina. Some patients have only 50 blisters or fewer. Others have too many to count.
- **Mode of transmission :-** Transmission occurs from the patient of chicken pox. the diseases spread either by droplet infection or by contact with skin of infected person.
- **Prevention :-** wash hand with soap specially after visiting public places avoid direct contact with infected or recently infected person use gloves and masks while taking care of people with chicken pox maintain a healthy lifestyle to boost your immunity level. Take vaccine to prevent chicken pox.
- **Treatments :-** Calamine lotion and a cool bath with added baking soda, oatmeal may help relieve some of the itching. Try to keep fingernails short and minimize scratching to prevent the virus from spreading to others and to help prevent skin infections. antiviral medication such acyclovir can also be given by doctors.

Q.8) Write about causative agent, symptoms, transmission and prevention and treatment of AIDS?

Ans. AIDS is acquired immunodeficiency syndrome it is a chronic disease.

- **Causative agent :-** acquired immunodeficiency syndrome (AIDS) is a chronic life-threatening condition caused by the human immunodeficiency virus (HIV).
- **Symptoms :-** The symptoms of HIV usually differ from person to person and in some cases, a patient infected with the HIV infection may not experience any symptoms at all. The common signs and symptoms of HIV includes Fever, Chills, Headache, Joint pains, Sore throat, Muscle aches, upset stomach, red rashes on the skin, tiredness and weakness, sweating during the night, Swollen or enlarged Glands These symptoms can last from a few days to several weeks. A person with HIV often experiences no symptoms, feels healthy, and appears healthy.
- **Mode of transmission :-** Most people who get HIV get it through anal or vaginal sex, or sharing infected needles, syringes, or other drug injection equipment, it can also transmit by blood transfusion
- **Prevention :-** early diagnosis and assessment, HIV testing and treatment, never shared needles and use sterile needles, HIV infected mothers should feed their baby a formula milk, abstinence
- **Treatment :-** Although there is no cure for AIDS, medications have been highly effective in fighting HIV and its complications. Drug treatments help reduce the HIV virus in your body, keep your immune system as healthy as possible and decrease the complications you may develop. The drug includes Abacavir, Didanosine, Emtricitabine , Lamivudine , Stavudine , Tenofovir, Zidovudine

Q.9) Write about causative agent, symptoms, transmission and prevention and treatment of Tuberculosis?

Ans. Tuberculosis

- **Causative Agent :-** Tuberculosis (TB) is caused by a bacteria called Mycobacterium tuberculosis
- **Symptoms :-** A cough that lasts for a period of more than 3 weeks, night sweats, chest pain, coughing up blood, tiredness all the time, experiencing chills, Experiencing fever, Loss of appetite, weight loss.
- **Mode of transmission :-** Tuberculosis is mainly an airborne infection it is transmitted by droplet infection and droplet nuclei when people who have tuberculosis cough or sneeze, and other people then breathe in the bacteria. It is also transmitted by dishes or other articles used by tuberculosis patient. it is also transmitted by coming in contact with sputum of tuberculosis patient.
- **Prevention :-** Maintain good ventilation TB can remain suspended in the air for several hours with no ventilation. UV light kills off TB bacteria. Maintain good hygiene such as covering the mouth and nose when coughing or sneezing reduces the spread of TB bacteria. Take BCG vaccine to prevent TB
- **Treatment :-** Antibiotics treatment must continue for a minimum of six to nine months. The most common medications used for tuberculosis treatment are Isoniazid, Pyrazinamide, Rifampin, Ethambutol

Q.10) Write function and daily requirement of protein?

Ans. Protein constitute about 20% of the body weight in an adult they are made up of smaller units called amino acids 24 amino acids are known to be needed for human body out of them 9 amino acids are of such type that they cannot be synthesised in human body, and they are called as essential amino acid other 15 amino acids are synthesised in the body

Function of protein

- Body building
- repair and maintenance of body tissue
- Synthesis of substances like antibodies, plasma proteins, haemoglobin, enzymes, hormones and coagulation factors
- Protein facilitates the biological reaction in body
- It improves the immune system
- Protein build neurotransmitters which regulate the brain activity
- Protein is also involved in DNA synthesis

Daily requirement of protein :- The recommended dietary allowance to prevent deficiency for an average adult is 0.8 grams per kilogram of body weight.

Q.11) Write about gram staining methods of bacteria?

Ans. Gram staining is most fundamental and widely used technique for the differentiation and identification of bacteria. this differential staining method was discovered by Christian gram in 1884. this method helps in determining shape size and also differentiates bacteria into 2 major groups that is gram positive and gram negative

Principle of Gram Staining method :- The basic principle of gram staining involves the ability of the bacterial cell wall to retain the crystal violet dye during solvent treatment. Gram-positive microorganisms have higher peptidoglycan content, whereas gram-negative organisms have higher lipid content. gram positive bacteria retain the stain and appear as blue or violet or purple colour whereas gram negative bacteria loses the stain and appear as red or pink colour.

Procedure :-

- Make smear by given culture on a clear glass slide
- Fix the smear by heating it or air dry it
- Flood with crystal Violet and wait for 1 minute
- wash with tap water to remove extra crystal Violet
- flood with gram iodine and wait for one minute
- wash with tap water
- counter stain with safranin and wait for 30 seconds wash with tap water and dry or blot dry with blotting paper
- observe under oil immersion

Q.12) Write about ill effect of air pollution and its prevention?

Ans. The air pollution definition says that when any physical, chemical, or biological change takes place in the air and contaminates it, then it is called air pollution.

A) ill effect of air pollution :-

- Diseases :- Air Pollution can lead to increasing diseases like throat infections and lung cancer in humans. Ischemic heart disease, stroke, chronic obstructive pulmonary disease (COPD), lung cancer, and acute lower respiratory infections in children are among the most prevalent diseases induced by air pollution.
- Global warming :- Air Pollution can increase the amount of global warming as the temperature of the earth will keep rising with the emission of harmful gases. With rising global temperatures, the ice will melt, and it will leads to increase in sea level
- Acid rain :- When water droplets combine with harmful chemicals and pollutants, it will lead to acid rain.
- Ozone layer Depletion :- Air pollution will lead to depletion of the ozone layer that protects us from harmful UV sun rays

B) Prevention of air pollution :-

- Prefer using public transport as it will reduce the emission of carbon dioxide into the air
- Use energy-efficient electrical devices at the workplace and home place.
- Instead of using fossil fuels, we can use natural resources to produce energy like Solar Energy, Wind Energy, etc.
- Make less use of air conditioners

Q.13) Write about ill effect of water pollution and its prevention?

Ans. Water pollution can be defined as the contamination of water bodies. Water pollution is caused when water bodies such as rivers, lakes, oceans, groundwater and aquifers get contaminated with industrial and agricultural waste.

A. ill effect of air pollution :-

- In humans, drinking or consuming polluted water in any way has many disastrous effects on our health. It causes typhoid, cholera, hepatitis and various other diseases.
- Water pollution can cause an entire ecosystem to collapse.
- Water pollution will also affect the aquatic life
- Water pollution leads to disruption in food chain

B. Prevention of water pollution :-

- treating waste products with some chemicals before disposing of it in a water body helps reduce water pollution on a large scale

- By using soluble products that do not go on to become pollutants, we can reduce the amount of water pollution caused by a household.

Q.14) Write a note on epidemiology?

Ans. Definition :- Epidemiology is defined as the detailed scientific study of the distribution and determinants of disease or disability in society. In epidemiological studies communicable, non-communicable and nutritional deficiencies are also included.

Epidemiology is derived from Greek word - Epi means among, Demo means people, Logos means study

Methods of epidemiology - There are 4 different types of method or studies which are present in epidemiology

- 1) **Quantitative studies :-** It includes basic measurement such as ratio, rate and proportion of mortality, morbidity, incidence and prevalence
- 2) **Descriptive studies :-** Study with occurrence and distribution of disease it deals with time place and person
- 3) **Analytical studies :-** It deals with the studies to determine the hypothetical consideration concerning with disease
- 4) **Experimental studies :-** It is carried out to provide a scientific proof and providing a measuring method

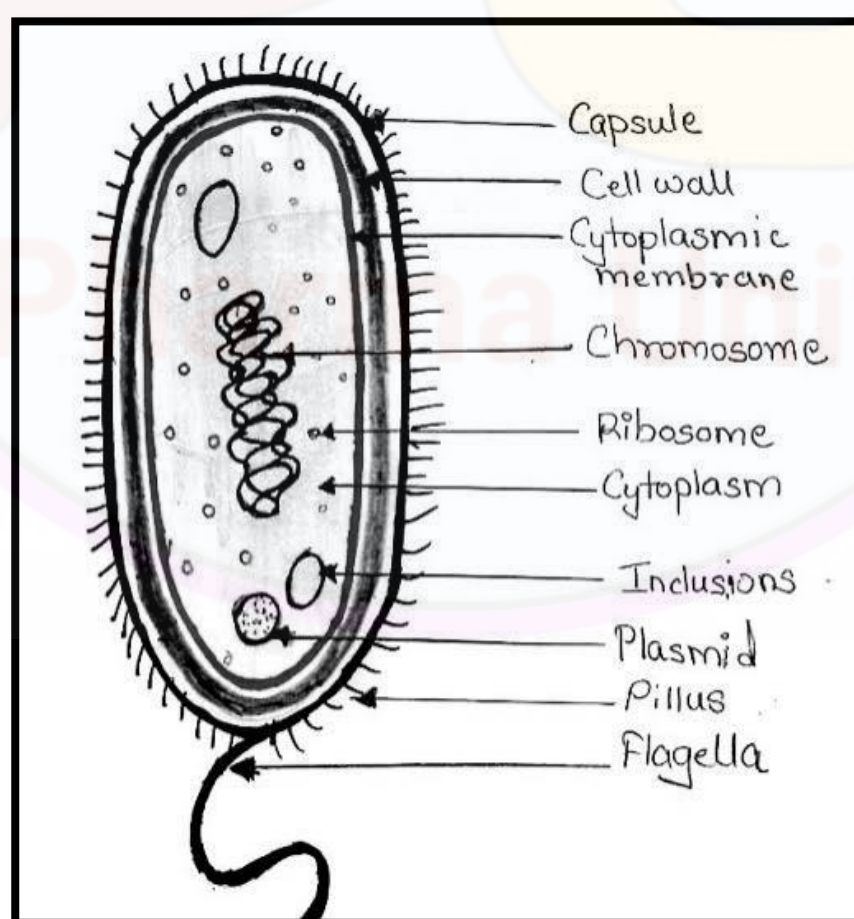
Uses of Epidemiology

- To make a community diagnosis - Epidemiology helps to identify and describe health problems in a community (for example, the prevalence of anaemia, or the nutrition status of children).
- To monitor continuously over a period of time the change of health in a community. (For example, the effect of a vaccination programme, health education, nutritional supplementation).
- To practice surveillance for a specific disease in order to be able to act quickly and so cut short any outbreak (example cholera).
- To investigate an outbreak of a communicable disease, analyse the reasons for it, plan a feasible remedy and carry it out, and monitor the effects of the remedy on the outbreak.
- To plan effective health services. Effective services, interventions and remedies all depend on accurate community data.

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Q.15) Draw the diagram of typical bacterial cell and name the component of it?

Ans.



Very Imp Note :-

- Please Read All the chapters very carefully before Social Pharmacy Exam
- These questions are only for the reference purpose

