

UNIVERSITY SOLVED QUESTION WITH ANSWER

Year : 2024

Subject : Social Pharmacy

Subject Code : ER20-15T

Subject In-Charge : Pankaj Kumar Rout



ODISHA STATE BOARD OF PHARMACY
D. Pharm Annual Examination, 2024 (Part – I) [ER-2020]

Roll No.....

Date: 27/01/2025

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NUMBER.
QUESTION PAPER CONTAINING ANYTHING OTHER THAN THE ROLL NUMBER WOULD BE
TREATED AS MALPRACTICE**

Answer the questions serially and continuously

Subject: SOCIAL PHARMACY (Theory)

Full Mark -80

Time -3 Hours

6x5=30 marks

I. LONG QUESTION (Answer any 6 out of 7 questions)

- Enlist the communicable diseases and briefly write about their prevention.
- Explain demographic cycle and its stages.
- Define Balanced diet. Describe the major types of Malnutrition.
- Describe the role of pharmacist in implementing the National Health Programs
- Enlist the methods of Family Planning and discuss role of pharmacist in promoting Family Planning.
- Describe the importance of breast feeding and the ill effects of bottle feeding.
- Discuss the social impact of alcohol and tobacco.

II. WRITE SHORT NOTES (Answer any 10 out of 11 questions)

10x3=30 marks

- | | | |
|---------------------|-----------------------------|-------------------------|
| a) RNTCP | b) Quarantine | c) Drug abuse |
| d) Active immunity | e) Pharmaceutical pollution | f) Food fortification |
| g) Nutraceuticals | h) Poliomyelitis | i) Adulteration of food |
| j) Crude death Rate | k) Water borne diseases | |

III. OBJECTIVE QUESTIONS (Answer ALL questions of A, B & C)

20x1=20 marks

A. Expanso the following abbreviations: [5x1=5]

- a) AIDS b) ICDS c) NVBDCP d) PHC e) QALY

B. Fill in the blanks: [10x1=10]

- World Health Day is observed on _____
- Ziehl – Neelsen Stain is used to identify _____
- FIP DG17 is related to _____
- Causative organism of hepatic amoebiasis is _____
- The energy provided by 1 gm of fat is _____ kcal
- National Health Mission was launched in the year _____
- ASHA stands for _____
- The number of essential amino acids is _____
- Pernicious anemia is caused by deficiency of vitamin _____
- Widal test is used in the diagnosis of _____

C. Multiple Choice Questions (Choose the most appropriate answer): [5x1=5]

- Rabies is a disease causes by
a. Bacteria b. Virus c. Fungi d. Protozoa
- Severity of a disease is indicated by
a. Incidence b. Morbidity c. Prevalence d. Incubation period
- Commonest method to dump solid waste is
a. River b. Ocean c. Landfill d. Recycle
- Statistical study of human population is called
a. Anthropology b. Demography c. Sociology d. Epidemiology
- Global outbreak of disease is called as
a. Epidemic b. Pandemic c. Outbreak d. Hyperendemic

III. Objective questions

A. Expand the following abbreviation.

- AIDS - Acquired Immuno Deficiency Syndrome
- ICDS - Integrated Child Development Scheme
- NVBDPC - National Vector Borne Disease Control Programme
- PHC - Primary Health Center
- QALY - Quality-adjusted life year

B. Fill in the blanks

- World Health Day is observed on 7 April.
- Ziehl-Neelsen stain is used to identify Acid-fast organism (Mycobacteria).
- FIP DGI 7 is related to Advancing Integrated Service.
- Causative organism of hepatic amoebiasis is Entamoeba histolytica.
- The energy provided by 1 gm of fat is 9 kcal.
- National Health Mission was launched in the year 2013.
- ASHA stands for Accredited Social Health Activist.
- The number of essential amino acid is 9.
 - pernicious anemia is caused by deficiency of Vitamin B₁₂.
 - Widal test is used in the diagnosis of Typhoid fever or Enteric fever.

C. Multiple Choice Questions (Choose the most appropriate answer).

1. Rabies is a disease caused by

- a. Bacteria b. virus c. Fungi d. protozoa

2. Severity of a disease is indicated by
a. Incidence b. morbidity c. prevalence d. Incubation period

3. Commonest method to dump solid waste is
a. River b. ocean c. Landfill d. Recycle

4. Statistical study of human population is called.
a. Anthropology b. Demography c. sociology d. Epidemiology

5. Global outbreak of disease is called as
a. Epidemic b. pandemic c. outbreak d. Hyperendemic

II. Write Short Notes

a) RNTCP:-

→ RNTCP stands for Revised National Tuberculosis Control programme.

→ TB is one of the most ancient disease.

→ It is caused by mycobacterium tuberculosis.

→ It was found in 1906 first time in India.

Objectives:-

→ Describe Revised National Tuberculosis Control programme.

→ Explain organization

→ Describe laboratory network

→ List New initiatives.

b) Quarantine:-

Quarantine has been defined as "the limitation of freedom of movement of such well persons or domestic animals exposed to communicable disease for a period of time not longer than the longest usual incubation period of disease, in such manner

as to prevent effective contact with those not so Exposed."

→ Quarantine measures are also applied by a health authority to a ship, an aircraft, a train, road vehicle, other means of transportation or containers, to prevent the spread of disease, reservoirs of disease or vectors of disease.

→ Quarantine may comprise

(a) Absolute quarantine as defined above

(b) modified quarantine

(c) segregation

→ (b) modified quarantine:-

A selective partial limitation of freedom of movement, such as exclusion of children from school.

→ (c) segregation:-

The separation for special consideration, control or observation of some part of a group of persons (or domestic animals) from others to facilitate control of a communicable disease.

Eg:- removal of susceptible children to homes of immune person.

c) Drug Abuse:-

Drug abuse may be defined as the habitual use of drugs not needed for therapeutic purposes, solely to alter one's mood, affected or state of consciousness, or to affect a body function unnecessarily.

→ Continued use of drugs can lead to drug dependence, a state of physical and mental dependence.

→ Commonly abused drugs:-

marijuana, Cocaine, Heroin, alcohol

→ Drug abuse or substance abuse refers to the use of certain chemicals for the purpose of creating pleasurable effects on the brain.

d) Active Immunity:-

→ The word immunity is derived from the Latin word 'immunis' meaning 'to exempt'.

→ Immunity is the ability of the body to protect against all types of foreign bodies like bacteria, virus, toxic substances etc. which enter the body.

→ Immunity that develops in response to an infection or vaccination is called Active immunity.

→ It is also known as adaptive immunity.

→ Resistance developed by an individual as a result of an antigenic stimulus.

→ Used for prophylaxis to increase body resistance.

→ There are two types of Active immunity;

1. Natural active immunity.

2. Artificial active immunity.

e) pharmaceutical pollution:-

→ Environmental exposure to active pharmaceutical ingredients (APIs) can have negative effects on the health of ecosystem and humans.

→ While numerous studies have monitored APIs in rivers, these employ different analytical methods, measure different APIs, and have ignored most of the countries of the world.

→ pollutions like,

(1) Soil pollution

(2) Bio magnification

(3) Water pollution

(4) Environmental pollution (As plastics are non-biodegradable)

♀) Food Fortification:-

→ Food Fortification is the process of adding vitamins, minerals or other micronutrients to food items during the production process.

→ There is another type of fortification known as point-of-use fortification where the minerals and vitamins are not added to the food during the processing of the food items but just before the consumption of such items that occurs either at homes, schools or any child care ~~base~~ facilities.

→ Food fortification is diff. from bio fortification

→ It helps in addressing the issues of "hidden hunger" i.e. micronutrient deficiency and thus it helps in preventing diet-related non-communicable diseases.

→ Especially in low and middle-income countries there exist a lot of such vitamin and mineral deficiencies which compromise the physical and mental capacities of their vast populations.

→ Therefore to prevent such micronutrient deficiency many governments in the developing world have asked for mandatory food fortification for certain time.

g) Nutraceuticals:-

- Nutraceuticals are products, which other than nutrition are also used as medicine.
- A nutraceutical product may be defined as a substance, which has physiological benefit or provides protection against chronic disease.
- Nutraceutical may be used to improve health, delay the aging process, prevent chronic diseases, increase life expectancy, or support the str. or function of the body.
- Now a days, Nutraceuticals have received considerable interest due to potential nutritional, safety and therapeutic effect.
- recent studies have shown promising result for these compounds in various complications. In the present review much effort has been devoted to present new concepts about nutraceutical based on their diseases modifying indications.

h) poliomyelitis:-

- polio is an illness caused by a virus that mainly affects nerves in the spinal cord or brainstem.
- In its most severe form, polio can lead to a person being unable to move certain limbs, also called paralysis.
- It can also lead to trouble breathing and sometimes death.
- The disease also called poliomyelitis.

Abortive polio :-

About 5% of people with the poliovirus get a mild version of the disease called abortive poliomyelitis. This leads to flu-like symptoms that last 2 to 3 days. These includes:

- Fever
- Headache
- muscle aches
- Sore throat
- Vomiting

Nonparalytic polio and paralytic polio :- symptoms

- bk
- Neck pain
 - Aches
 - severe headache
 - muscle weakness

- Intense pain
- Extreme sensitivity to touch
- muscle spasms

i) Adulteration of Food :-

→ Food Adulteration can be defined as the practice of adulterating Food or Contamination of Food materials by adding a few substances, which are collectively called adulterants.

→ Adulterants are the substance or poor quality products added to food items for economic and technical benefits.

→ Addition of these adulterants reduces the value of nutrients in food and also contaminates the food, which is not fit for consumption.

→ These adulterant can available in all food products which we consumes daily including dairy products, cereals, pulses, vegetables etc.

i) Crude death rate :

Crude death rate (CDR) is a statistical term. It is used for measuring the decline in the population. → The word Crude is used because age or sex is not taken into account for making differences among the population.

→ The opposite of Crude death rate is the measuring of growth of population which is called the Crude birth rate (CBR). Both of these are measured per 1000 population.

→ The number of deaths occurring in a population in a given geographical area during a given year per 1000 mid-year of the total population is called Crude death rate.

→ If the CDR is less than 10 per 1000 then it will be considered as low where as if CDR is more than 20 per 1000 then it will be considered as high.

$$\text{CDR} = \frac{\text{Number of deaths in one year}}{\text{mid year population}} \times 1000$$

k) Water borne disease :-

Water borne illness is caused by recreational or drinking water contaminated by disease-causing microbes or pathogens. Of note, many water borne pathogens can also be acquired by consuming contaminated food or beverages.

Symptoms:-

→ water borne illness can cause a variety of symptoms. While diarrhea and vomiting are the most commonly reported symptoms of waterborne illness, other symptoms can include skin, ear, respiratory, or eye problems.

Causative agent:-

- Giardiasis
- Harmful algal blooms
- Hot tube rash
- Nonviral infection
- Swimmer's Ear
- Swimmer's Itch.



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Long question :-

① Demography :-

→ Demography is the scientific study of human population.
 → It may be defined as the science which deals with the study of all aspects of population progress, welfare, death in a family, birth in a family, age and number of children and their qualification, deformities in the family and sanitation etc.

→ It focus on the following 3 observable human phenomenon.

- (i) changes in population size
- (ii) composition of population
- (iii) Distribution of population in space.

Demographic cycle :-

Studying the world population since 1650 suggests that demographic transition of a nation involves of 5 stages. This stages constitute the demographic cycle.

(i) High stationary :-

→ It is characterized by both high birth rate and high death rate.

→ Therefore the population remains stationary. It is seen when the country is economically most weak.

→ India was in this stage till 1920.

(ii) Early expanding :-

→ It begins with the declining of death rate while birth rate still remains high.

(iii) Late expanding :-

→ The death rate declines still further and the birth rate tends to fall but the population tends to grow as the birth rate is higher than the death rate. In this

rates of population growth decrease.

(iv) Low stationary :-

→ This stage is characterized by low birth and low death rate with the result that the population become stationary.

(v) Declining :-

→ Population begins to decline because the birth rate is lower than the death rate.

Long question

(f) Breast feeding:-

Breast feeding is the practice of providing a new born with breast milk to meet all of their nutritional needs which promotes healthy growth development upto a certain point.

→ Water, protein, carbohydrate, lipid, antibodies, hormones, vitamins, minerals and other immune cells are all present in breast milk.

Importance of breast feeding:-

● Breast feeding is beneficial for the infants as well as for the mothers.

* Nutrition reach composition:-

Breast milk is a complete and perfectly balanced source of nutrition for infants. It contain the ideal combination of protein, fat, vitamins, mineral needed for a baby, which contributes a essential part in growth and development.

● * Immune system support:-

Breast milk contain antibodies and immunoglobulins that helps protect the infants from infections and diseases, providing passive immunity during the early month of life when the baby immune system is still developing.

* Brain development:-

→ The fatty acid found in breast milk, particularly DHA, contribute to the development of the infant's brain and nervous system.

* Bonding and emotional connections:-

Breast feeding promotes a strong emotional bond betⁿ mother and baby, increasing a sense of security and comfort for the infant.

Effect of bottle feeding:-

- Interferes with bonding.
- More diarrhoea and respiratory infections.
- Mother may become pregnant sooner.
- More allergy and milk intolerance.
- Increase the risk of chronic disease.
- Lower scores on intelligence tests.

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Long question: -

(c) Balance diet :-

- A balance diet is a way of eating that offers the proper amount of each ~~nutrition~~ nutrient to support general health and well-being.
- To make ensure the body gets wide range of vital nutrients such as carbohydrate, proteins, fats, vitamins and minerals.
- A balance diet has the following quantities:
 - (i) It meets the nutrient requirement of the body.
 - (ii) It consist of difⁿ types of food item.
 - (iii) It provide and adiqet amount of energy.
- A balance diet leads to a good physical and mental health.

Mal nutrition :-

- Mal nutrition is a serious condition that happen when your diet does not contain the right amount of nutrients.
- Mal nutrition is a condition that develops when the body needs a vitamin, mineral, and other nutrients. It needs to maintain the healthy tissues and organ funⁿ.
- Mal nutrition occur in people who are either under nurished or over nurised.

Types of mal nutrition :-

- Mal-nutrition is 2 types
 - (i) under nutrition
 - (ii) over nutrition.

(i) under nutrition:—

When a person does not get enough essential nutrients, leading to growth problem, under weight and deficiency in vitamins and minerals.

(ii) over nutrition:—

When a person consumes excessive nutrients particularly calories, leading to over weight, obesity, related health issues like Diabetes and various health problems.

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National Health Mission:-

Introduction:-

The National Health Mission (NHM) is a flexible health care programme ~~launched~~ launched by government of India. In 2005 to address the health needs of the under served and vulnerable population in the Country.

- The goals for NHM have been set specifically for States.
- The National Health Mission in India several goals aim at Improving the health and wellbeing of the population.

→ While specific priorities may vary across states.

The following have common goals set by the NHM:-

(i) Universal Immunization:-

→ Ensure universal immunisation coverage to protect children and adults against preventable diseases. This involves expanding the reach of immunisation service and increasing community awareness → about the importance of vaccination.

(ii) Promote Family Planning:-

→ Encourage and facilitate family planning services to enable couples to make important choices about the number and spacing of their children. This contributes to population stabilization and national health.

(iii) Control Communicable Diseases:-

→ Implement strategies to control the spread of communicable diseases such as malaria, tuberculosis, HIV, AIDS. This involves prevention, diagnosis, treatment and awareness programmes.

(iv) Non-Communicable Disease (NCDs):-

→ Develop strategies to address the rising burden of non-communicable disease (NCD) such as diabetes, cardiovascular and cancer. This includes prevention and measurement of NCDs.

• The endeavour would be to ensure the achievement of indicators
1) Reduce maternal mortality rate (MMR) to 1000 live births.

- 2) Reduce Infant mortality Rate (IMR) to 25/1000 'live births.
- 3) prevention and Reduction of Anaemia in women aged 15 to 49.
- 4) prevent and reduce mortality rate and morbidity from communicable and non-communicable injuries and emerging diseases.

Millennium Development Goals :- (MDGs)

Introduction :-

→ The millennium development goals were a set of international development goals that were established following the millennium ~~submit~~ summit of the united nations in 2000. This goals were designed to address various global challenges and improve the living conditions of people around the world. The target date for achieving these goals was set for 2015.

• The eight millennium development goals were:-

- 1) Eradicate extreme poverty and hunger
- 2) Achieve universal primary education
- 3) promote gender equality and empower women
- 4) Reduce child mortality

(3) physical / Barrier methods

In barrier procedures, barriers are used to prevent the physical interaction between the ovum and the sperm.

For example: - male Condom and Female Condom.

→ male Condoms are thin rubber or latex barriers used to prevent ejaculated semen from entering the female reproductive system.

→ Another barrier tool used to protect women's vagina and Cervix is the Female Condom, which is comprised of a thin rubber or ~~latex~~ latex sheath. By obstructing sperm entrance into the female reproductive canal, they hinder pregnancy.

Role of pharmacist in promoting family planning

→ Contraceptive Counseling

Education - Pharmacist can educate individuals and couples about various contraceptive methods, including their effectiveness, side effects and proper usage

personalised advice :-

They can offer personalised advice based on the individual's health history, preferences and lifestyle

Dispensing Contraceptives: - prescription and over the counter (OTC) methods. Pharmacist dispense both prescription and OTC contraceptive methods. This includes oral contraceptives, patches, injections, condoms, emergency contraceptions.

Emergency Contraception: - Pharmacist can provide timely access to emergency contraceptions, reducing the risk of unintended pregnancies after unprotected sex.

Patient education: - Pharmacist can ensure that patients understand how to correctly use their chosen contraceptive method to maximize its effectiveness.

Mother and Child Health: -

→ Early and regular checkups: Ensure that pregnant women receive early and regular pre-natal checkups. It is essential for monitoring the health of both the mother and the developing foetus.

→ Screening and monitoring: -

- Regular ^{free} screening and monitoring during pregnancy help identify and address potential complications, ensuring a healthy pregnancy and reducing the risk of adverse outcomes.

safe delivery and post natal care:-

→ skilled birth attendance - Ensuring that deliveries are attended by skilled health care professionals. Reduces the risk of complications during child birth

Immunisation:-

vaccination programme:-

Implementing comprehensive immunisation programmes helps to protect children from preventable disease, contributing to their overall health and wellbeing.

Nutrition:-

→ Breast feeding promotion:-

promoting and supporting breast feeding is critical for providing new-borns with essential nutrients and antibodies, contributing their immune system development.

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→ Breast feeding:-

Breast feeding is the practice of providing a newborn baby with breast milk to meet all of their nutritional needs, which promotes healthy growth and development upto a certain point.

→ Water ...

make a person more wakeful, alert and active, causing excitement

* Types of drugs:-

* Hallucinogens:-

Example:-

LSD, Mescaline, Ganga., Charas

Effects:-

Alter thoughts, feelings and perceptions.

* Psychotropic drugs:-

Drugs that alter mood, thought and behaviour are known as psychotropic substances.

* Narcotics products:-

The drugs known as Narcotics are those that bind directly to the brain opioid receptors and reduce moderate to severe pain and consciousness.

→ These are primarily derived from lumen plants and others are derived from fungus.

Impact on social health:-

→ Drug Abuse and drug misuse can have significant and far reaching impacts on social health, affecting individuals, families and communities.

→ The consequences beyond the individual user can contribute to various social problems. These medicines change our social interactions and hurt social health because of their addictive properties.

• Family Disruption:-

Drug misuse can contribute to neglect and abuse of children within the family.

• Economic Burden:-

Substance abuse can lead to decreased work performance, job loss which affecting individual and family.

• Suicidal behaviours:-

→ Suicidal thoughts or behaviour are not limited to any single diagnostic group or condition. Death by suicide occurs while distressing frequency among many different illness including mood disorders, substance abuse disorders, and personality disorders.

→ The Institute of Medicine (2002) summarised the state of research in suicide and suicide prevention reported that in US that over 90% of suicide are associated with mental illness or substance abuse disorders.

→ Although suicide is not a form of mental illness, it is a serious potential side effect of several treatable mental disorders, such as ~~major~~ major depression, post-traumatic stress disorder, border line personality disorder, substance use disorders, anxiety disorders.

A communicable disease is any disease that passes between people or animals. People sometimes refer to communicable diseases as “infectious” or “transmissible” diseases.

Pathogens, including bacteria, viruses, fungi, and protozoa, cause communicable diseases.

Symptoms

Once a pathogen has entered a person's body, it often will begin replicating. The individual may then begin to experience symptoms.

Symptoms will vary depending on the disease. Some people will not experience any symptoms. However, they can still transmit the pathogen.

Some symptoms are a direct result of the pathogen damaging the body's cells. Others are due to the body's immune response to the infection.

Some communicable diseases may be mild, and symptoms pass after a few days. However, some can be serious and potentially life threatening. Symptom severity may vary depending on a person's overall health and immune function.

Types and symptoms

Four main types of pathogens cause infection: Viruses, bacteria, fungi, and protozoa.

Viruses

Viruses are tiny pathogens that contain genetic material. Unlike other pathogens, they lack the complex structure of a cell.

To replicate, they must enter the cells of other living beings. Once inside, they use the cell's machinery to make copies of themselves.

Bacteria

Bacteria are microscopic, single-celled organisms. They exist in almost every environment on earth, including inside the human body.

Many bacteria are harmless, and some

Bacteria

Bacteria are microscopic, single-celled organisms. They exist in almost every environment on earth, including inside the human body.

Many bacteria are harmless, and some help the body to function. However, bacteria can also cause infections that damage the body.

Fungi

Fungi are a type of organism that includes yeasts, molds, and mushrooms. There are millions of different fungi. However, only around 300 cause harmful illnesses.

Fungal infections can occur anywhere in the body. However, they commonly affect the skin and mucus membranes.

Fungal infections can occur anywhere in the body. However, they commonly affect the skin and mucus membranes.

Protozoa

Protozoa are microscopic organisms that typically consist of a single cell.

Some protozoa are parasitic, meaning they live on or inside another organism and use the organism's nutrients for their own survival. Parasitic protozoa can cause various diseases.