

THE SUPERIOR COLLEGE, LAHORE
4th PROFESSIONAL MBBS

ANNUAL EXAMINATION 2019

COMMUNITY MEDICINE

(S.P.O.)

139

Roll No. _____

Time Allowed: 2 hours

Total Marks: 75

Instructions

- The SPO's part is to be submitted within 2 hours. Extra time will not be given.
 Not Hand Writing use of eraser and marker for headlines will increase the presentation of your paper.
 Do not write your name or disclose your identity in anyway.

Q1	Primary health care is a new approach to health care which integrates at the community level all the factors required for improving the health status of the population. a) Enlist the principles of Primary Health Care 174 b) What is the selective Primary Health Care approach proposed by UNICEF for mother and child health 235	(2) (3)
Q2	Different type of immunity being triggered in human beings serve as the basis of eradication or control of spread of disease a) Define Herd immunity. Name different elements of Herd immunity. 127 b) What do you understand by the term Recombinant protein vaccine? Give its advantages and disadvantages. Give one example	(3) (2)
Q3	Exploration of disease transmission mechanisms are corner stone of epidemiology of infectious diseases and play pivotal role in disease prevention a) Enlist the ways by which vectors transmit the infectious agents 52 b) What are the factors which influence the ability of vectors to transmit disease	(2) (3)
Q4	Health education is indispensable in achieving individual and community health. It can help to increase knowledge and to reinforce desired behavior patterns. a) What is the role of health care providers regarding health education? 302 b) Define motivation and enlist its stages? 301	(3) (2)
Q5	Dengue is a social problem and can be overcome only by including all segments of the society in the anti-dengue drive. Therefore, every Department and person should fulfill their responsibility to save the people from dengue. a) Name the vector involved in transmission of dengue. 62 b) In the context of peculiar habits of this vector, what are the general housekeeping activities to be taken by the community for the prevention and control of Dengue? 63	(1) (4)
Q6	A comparative study was conducted to assess the hemoglobin level at the start and towards the end of the pregnancy in the gynecology OPD. a) Which test of significance should be used for analysis of such data and justify your answer? 236, 277 b) How will you interpret the results on the basis of p value if a is kept at 0.05. (2)	(3) (2)
Q7	A case control study was conducted to determine the association of preterm delivery and low socioeconomic status (L.S.E.S) of females. 162 females were studied, 64 delivered preterm babies out of these 53 were belongs to low S.E.S. 40 females belong to high S.E.S delivered normal babies. a) Construct 2 x 2 table b) Calculate measure of association }? c) Interpret your results	(2) (2) (1)

Population pyramid is the graphical presentation of composition of the population of a country and one can have multifaceted information by looking on this presentation.

- Enlist the uses and information a population pyramid provides to the Demographers
- Define Population Momentum.
- Enumerate the stages of population transition

Low birth weight (LBW) is a phenomenon which is multifactorial in origin and remained a significant public health problem in many developing countries including Pakistan

- Enlist the components of kangaroo mother care
- What are the direct intervention measures for prevention of incidence of low birth weight babies

Occupational cancer is caused wholly or partly by exposure to a cancer causing agent (Carcinogen) at work, or by a particular set of circumstances at work.

- What are the characteristics of occupational cancer
- Enlist the control measures for industrial cancer

Food security is the biggest challenge, the world is facing nowadays and the situation is worse in developing countries. The condition is grave when we talk about specific food elements. 40 % of children under five are facing stunted growth as reported in the last National Nutrition Survey of Pakistan.

- Define "Protein Energy malnutrition"?
- Name its types?
- How will you explain on basis of different classifications?

Drug addiction has become a world problem meriting the most serious consideration of all governments, international organizations and social welfare agencies.

- Differentiate between the terms "Drug Abuse" and "Drug Dependence".
- Briefly Describe different approaches used for prevention of drug addiction

Normally accidents are considered to be something inevitable to happen and people consider it a happening due to fate. But research has proven that accidents are preventable to a substantial extent.

- Define domestic accidents.
- Enlist the causes of domestic accidents.
- Enumerate the risk factors and prevention of one of the causes of domestic accidents

Water resources are depleting with every passing day and particularly availability of drinking water is posing a threat for the existence of life in many part of this planet.

- Enlist methods of water purification at small and large scale
- Compare and contrast the rapid and slow sand filters

What is the role of a school teacher in school health services

Q1

In a village development project, manual labor was provided by the villagers and consultancies were provided by different departments (health, education, agriculture and livestock).

a) Which principals of primary health care are used in this project.

b) Enlist components of primary health care

answer:

)

Principals

) Community participation.

) Equitable distribution.

) Inter-sectoral coordination.

) Appropriate technology.

B)

Annual 2019

Selective primary Health care approach proposed by UNICEF for mother & child health.

- Child - mother Health.
- Child - Mother Nutrition.
- Family and child welfare.
- Education.

Define Herd Immunity.

"Level of resistance of a community or group of people to a particular disease is called as Herd Immunity."

Elements of Herd Immunity:

- Occurrence of clinical & subclinical infection in herd.
- Immunization of herd.
- Herd structure.

Recombinant protein vaccine:

"A vaccine which is produced through recombinant DNA technology. This involves inserting the DNA encoding antigen that stimulates an immune response into bacterial or mammalian cell, expressing antigen in these cells and then purify it from them." e.g: primavax

Advantages:

- Rapid generation.
- Thermostability
- No risk of pathogenicity
- defined composition.

Disadvantages:

- Multiple doses needed
- Adjuvants needed.

Enumerate ways by which vector transmits the infectious Agent:

Direct Transmission

- Direct contact → ~~_____~~ ^(AIDS, STD's)
- Droplet infection → (Diphtheria)
- Contact with soil → (tetanus)
(Rabies)
- Inoculation into skin or mucosa.
- Transplacental → (Herpes virus)

Indirect

- Vehicle borne (Cholera)
- Vector borne (Malaria)
- Airborne (T.B)
- Fomite borne (Diphtheria)
- Unclean hands
- Unclean fingers.

Factors that influence the ability of vectors to transmit disease:

Host feeding preferences

Infectivity

Susceptibility

Domesticity

Suitable environmental factors

Role of health care provider in Health education:

- Provide opportunities for people to learn about health related problems.
- Make health and health related information easily accessible to community.
- Indicate to people alternative sol. for health problems.
- People must have access to proven preventive measures.

Define motivation & its stages:

"It is the power that drives a person from within to act"

→ Stages:

- **Awareness:** Person comes to know about new idea or practice. He has only very general information about it.
- **Interest:** In this stage, person is willing to listen or read more about it because there is felt need.
- **Evaluation:** Person weighs the pros and cons of the practice and evaluates its usefulness to him or family; results in a decision to try practice or reject it.
- **Trial:** In this stage, decision is put into practice or implement.
- **Adoption:** In this stage, person decides that the practice is good and adopt it.

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Vector involved in transmission of dengue :

→ *Aedes aegypti*

"It is the principal dengue vector responsible for dengue transmission & dengue epidemics."

Prevention & Control of Dengue:

- Travellers should sleep under impregnated nets and use repellents.
- Use of sprays.
- Breeding sites should be eradicated.
- Apply mosquito repellents lotion on uncovered body parts.

KEY TO UHS Solved UQS & MCQ

Biostatistics

13. A researcher wants to compare average weights of 100 women at the start and end pregnancy. (Annual 2016)

Which test of significance should be selected for analysis and why?
What would be your conclusion regarding rejection or acceptance of null hypothesis if α was set at 0.05 and the P value obtained is:

- i) 0.04
- ii) 0.07
- a) Pair T test: it is selected because we have to get two readings (before and after) same individual
- b) If p value is considered to be 0.04 the null hypothesis is accepted. If p value is considered 0.07 the null hypothesis is rejected

Ten government employees came for their annual medical examination in laboratory. They also gave blood to check their serum cholesterol levels. The values (Annual 2017)

Uses & information a population pyramid provides:

* It provides a demographic statement of current age & sex distribution of a population.

- Males on left side
- Females on right side
- Children at basement
- Elderly at top.

Uses:

- Male to female ratio
- Population changes
- Dependency ratio can be calculated.

Define population momentum:

$$\text{Momentum} = MV$$

"It is defined as greater the growth rate; the greater would be population and difficult would be to stop population momentum."

Stages of population transition:
"Moving from a stage of high birth rate and a high death rate to a low birth rate and low death rate is called demographic transition."

Components of Kangaroo mother care?

→ Kangaroo position:

- Skin to skin on mother chest secured with a wrap.

→ Kangaroo ~~position~~ Nutrition:

- Exclusive Breastfeeding whenever possible.

→ Kangaroo discharge:

- mother continues KMC practice at home after discharge.

→ Kangaroo Support:

- Health care staff provide support to mother to take care of her infant in hospital.

- Family support of mother in practicing KMC at home.

Prevention of LBW Babies:

- Nutrition of mother looked after properly.

- High risk mothers are identified and then cared accordingly.

- Birth spacing.

- Proper antenatal monitoring.

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12.Abstract/summary.

Q2

A coal-mine a new group of workers started facing the problem of bronchitis, dyspnea, cough and other lung problems. What can be the condition. Being the medical consultant of the mine how will you proceed for the improvement of such situation, enlist your steps.

Answer

CONDITION: ANTHRACOSIS -COAL WORKERS PNEUMOCONIOSIS.

MANAGEMENT PLAN FOR THE IMPROVEMENT

- A. Medical measures
- B. Engineering measures
- C. Legislation.

A. MEDICAL MEASURES.

⇒ PRE-PLACEMENT EXAMINATION

- ↳ Medical, family social and occupational history of worker.
- ↳ Blood and urine examination
- ↳ Vision test
- ↳ General physical examination.

⇒ PERIODIC EXAMINATION

- ↳ Regular checkup is necessary because many diseases show sign and symptoms after years.

⇒ MEDICAL AND HEALTH CARE SERVICES

The workers and people living in surroundings of the occupational environment must be immunized.

⇒ NOTIFICATION.

⇒ SUPERVISION OF WORKING ENVIRONMENT.

⇒ MAINTENANCE AND ANALYSIS OF RECORD.

⇒ HEALTH EDUCATION.

B. ENGINEERING MEASURES

- ⇒ Building design
- ⇒ Good house keeping
- ⇒ Ventilation
- ⇒ Mechanization
- ⇒ Substitution
- ⇒ Control at source
- ⇒ Isolation.
- ⇒ Protective devices
- ⇒ Monitoring
- ⇒ Research.

C. LEGISLATION

- ⇒ Legislation is of great importance for the control of occupational diseases.
- ⇒ Working hours, age, sickness and benefits and maternity leave are provided

Q3

Define Health education. Explain the scope of health education. Explain the objectives of health education.



Protein Energy malnutrition:

"Range of pathological conditions arising from simultaneous deficiency of protein and calories and commonly associated with infections."

Types:

→ Kwashiorkor

→ Marasmus.

Difference:

Features	Marasmus	Kwashiorkor
• Muscle wasting	Obvious	Hidden
• Fat wasting	Severe loss	Retained
• Oedema	None	lowe legs
• Weight for height	very low	low
• Mental changes	Quiet	Irritable

Drug addiction:

"State of periodic or chronic intoxication detrimental to individual and society produced by repeated intake of habit forming drugs."

Drug Dependence:

"A state, psychic and sometime also physical, resulting from interaction between a living organism and a drug characterized by behavioral and other responses that always include a compulsion to take drugs on a continuous and periodic basis in order to experience its psychic effects and sometimes to avoid discomfort of its absence is called drug dependence."

Drug Abuse:

"Self administration of a drug for non-medical reasons which may result in social, physical or emotional harm is called drug abuse."

Prevention:

→ Legal Approach.

- Prohibition of sale of tobacco.
- Smoking in school.
- Smoking in public.
- Public health education.

→ Educational Approach:

→ Community Approach:



An accident is an unexpected, unplanned occurrence which may involves injury.



And those accidents which takes place in the home or in its immediate surroundings, which are not connected with traffic vehicles and sports.



SlideShare

Domestic accidents

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Characteristics of Occupational Cancer

1. They appear after long exposure.
2. The period between exposure and development of the disease may be as long as 10 - 25 years.
3. The disease may develop even after cessation of exposure.

Risk Factors

- ▶ occupations at elevated heights or other hazardous working conditions
- ▶ alcohol or substance use.
- ▶ socio-economic factors including poverty, overcrowded housing, young maternal age.
- ▶ underlying medical conditions, such as neurological, cardiac or other disabling conditions.
- ▶ side-effects of medication, physical inactivity and loss of balance, particularly among older people.
- ▶ unsafe environments, particularly for those with poor balance and limited vision.

Methods of water purification:

Large scale:

- Storage
- sedimentation
- Filtration:
- Chlorination.

Small scale:

→ House hold purification of water

- Boiling
- Chemical disinfection.
 - * Bleaching powder
 - * Chlorine Solution
 - * chlorine Tablets
 - * ozone
 - * Copper sulphate
- Domestic water Filters.

→ Disinfections of wells.

Properties.

Area

operation

Rem. of color

Rem. of Bac.

Filter cleaning

Rapid Sand Filter

Small

more skilled

Good

98-99%

Backwashing

Slow

Large

less skilled

Better

99.9% - 99.9%

Scraping.

Role of School Teacher in School health service:

- He can give lecture on health and personal hygiene.
- He can give nutritional education.
- He attends parent teacher meeting.
- He actively participates in school meal service.
- He can vaccinate the children.
- Render First aid Treatment.
- He can supervise cleanliness of classroom.