
 Fayoum University	Academic Year: 2017/2018	Level: fourth grade	 الوياتة
	Academic program:	Department:	
	Course Code:	Course: Epidemiology	
	N. of exam paper: 4	Date: 24/12/2017	
	Time allowed: 2 hours	Total score: 80	

I- Short questions:

1. Regarding typhoid fever, give the following; reservoir, portal of exit, modes of transmission, portal of entry, and susceptibility (10 marks)

Reservoir:

- Humans : case (typical-mild)
- Carrier (incubatory-convalescent- asymptomatic)

Exit: small intestine & gall bladder-----feces
Kidney-----urine

Entry: Through gastrointestinal tract

Mode of transmission:

- Ingestion of contaminated food or water (handling-dust-flies-fresh sewage as manure)
- **Direct food borne infection** feco-oral

Susceptibility:

Age: all

Sex: males are more affected than females



Environmental factors: the disease spread among the low socioeconomic classes.

Immunity: inadequate

Season: summer

Exam instruction

1- It is necessary to answer only the obligatory questions. 2- Only the blue pen and pencil are allowed to use in the answer sheet 3- Only one sheet answer is allowed for every student- It is not allowed to borrow the tools (pen, pencils, drawing tools, calculator ...etc) 4- It is not allowed to use the cell phone or any of its application during the time of exam.

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2. A manifested attack of communicable disease as well as administration of vaccine can give various degrees of immunity; explain with examples if possible (10 marks)

An attack of infectious disease is followed by varied degree of immunity that may be

- Absolute: no second attack is reported for yellow fever only.
- Solid: almost absolute immunity. More than one attack is rare, measles, mumps, rubella, varicella, and diphtheria.
- High, moderate or weak degree of immunity in other diseases.

Protective Period of Active Immunization:



Short period:

- some months only as Cholera vaccine and plague vaccine which are protective for about six month
- About 3 years: TAB vaccine, of enterica.
- 3-5 years: DTP vaccine.
- 5 or more years: BCG vaccine, epidemic typhus vaccine.
- 10 years: international validity of yellow fever vaccine is from 10 days to 10 years. .

Solid lifelong immunity: as avirulent viral vaccines of measles, mumps, rubella and MMR. Booster immunization is thus not needed.

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3. Maternal acquired immunity is a naturally passive acquired immunity; discuss with examples if possible (10 marks)

- It is a passively natural acquired immunity.
- The pregnant provides the fetus with antibodies in the last intrauterine weeks.
- Acquired immunity is temporary, and fades in about six months.
- Maternal antibodies in serum of mother may be naturally acquired or artificially induced.
- But there is no maternally acquired immunity for: pertussis and tuberculosis, Pertussis: due to big molecular size of Ig M that cannot pass through placenta. Tuberculosis: immunity is cell-mediated

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4. Sabin vaccine is an important vaccine for prevention of poliomyelitis; mention: vaccine nature, applications, dose & route, Efficacy & protective period, adverse effects & contraindications (10 marks)

Nature;

Live attenuated trivalent vacc.

Applications ;

Compulsory (routine vacc.)

Vaccination Campaign

Dose;

Zero dose at birth and 3 primary doses of 2 drops 8 wks apart at 2, 4, 6 months---booster at 9, 12, 18 months

Route;

oral

Efficacy; (protective value);

95 %

protective duration.

Life long

Adverse reaction

General, VAPP


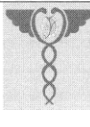
Contraindications;

Pregnancy.....

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5. Define: (10 marks, 2 marks for each)

a- **Convalescent carrier**

A person, in some infectious diseases, have recovered from an acute illness and may continue to shed the agent.

b- **Portal of exit**

It is the path by which an agent leaves the reservoir.

c- **Epidemic**

Sudden abnormal increases in number of cases in a community or region.

d- **Communicability period**

The time during which an infectious agent may be transmitted directly or indirectly from an infected person to another susceptible person.

e- **Sporadic cases**

Scattered infrequent cases. They maintain the disease in the endemic areas and may start an outbreak or even epidemic.

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