ANSWER SCHEME

Assignment (10%)

No.	Question / Answer Scheme	Marks
1.	Choose one food from the list below:	
	Raw meat	
	Oyster	
	Write an essay related to pathogenic bacteria that might contaminate the food.	
	You need to identify the source of contamination, symptoms of the foodborne	
	illness, and the prevention methods pertaining to the pathogenic bacteria. You	
	can also add other information that you think is necessary to be included in the	
	essay (e.g. statistic of outbreaks, intrinsic/extrinsic factor, etc.).	
	3 - 5 pages, double spacing, Times New Roman 12	
	Answer scheme	
	Raw meat	
	Raw meat can be contaminated by	
	Salmonella	1
	• <i>E. coli</i> O157:H7,	1
	• Listeria	1
	Campylobacter jejuni	1
	Yersinia enterocolitica	1
	Sources of contamination:	
	unhygienic slaughtering facilities, (clogged drain, dirty floor, etc)	1
	unhygienic equipment (biofilm formation)	1
	unhygienic personnel	1
	Inadequate chilling / freezing during transportation and storage	1
	Undercooked meat	1
	Cross-contamination between cooked and uncooked meat	1
	Symptom of illness:	
	Common symptoms: fever, diarrhea, vomiting, nausea, abdominal cramp,	1
	• <i>E. coli</i> O157:H7 can cause bloody diarrhea and hemolytic uremic syndrome (HUS)	1
	Salmonella Thyphi can cause typhoid fever	
	Prevention method:	1
	Regular cleaning and sanitation in the slaughtering facilities	1
	 Practice good hygiene and sanitation during food preparation 	1
	 Properly cook meat (internal temperature reach 70° C) 	1
		1

•	Avoid cross-contamination during food preparation
Other in	nformation:
•	statistics of outbreak
•	intrinsic/extrinsic factor
Oyster	
Oyster	can be contaminated by
٠	Vibrio parahaemolyticus
•	Vibrio vulnificus
Source	of contamination:
•	Vibrio spp. naturally inhabits coastal waters
•	Higher incidence is reported during summer as the bacteria favours
	warmer temperature
•	Oysters are filter-feeder and they feed by filtering water
•	Bacteria can concentrate in their tissue
•	Someone gets ill when they eat raw or undercooked oysters
Sympto	om of illness:
•	Vibrio parahaemolyticus infections result in diarrhea and vomiting
•	Vibrio vulnificus can cause wound infection
Preven	tion method:
•	Do not eat raw or undercooked oysters
•	Separate cooked and raw oysters to avoid cross contamination
•	Wash hands after handling raw oysters
•	Wash open wounds / cuts thoroughly with soup and water if they have
	been exposed to raw seafood or its juices
Other in	nformation:
•	statistics of outbreak
•	intrinsic/extrinsic factor