

Module 3 - More than one answer is possible

1. What food values are related to Arctic indigenous people?
 - a. Food supplements (artificial)
 - b. High consumption of carbohydrates (> 60%)
 - c. High animal proteins and fat (non-processed)
 - d. Berries, mushrooms, plants – sources of vitamins and minerals

2. What health problems are related to the food changes of Arctic indigenous people?
 - a. Obesity
 - b. Diarrhea
 - c. High prevalence of cancer
 - d. Alcohol abuse

3. What cultural values characterize the Arctic indigenous people?
 - a. Harmony with nature
 - b. Educations from the professionals
 - c. Soul and body united
 - d. Feelings must be rationalized

4. What are the mental health effects of colonization of Arctic indigenous people?
 - a. Suicide
 - b. Depression
 - c. Obesity
 - d. Health inequities

5. What are the main risk factors of suicide in the Arctic indigenous people?
 - a. Historical trauma
 - b. Depression
 - c. Alcohol
 - d. High consumption of proteins and fat

6. What are the main protective factors of suicide in the Arctic indigenous people?
 - a. Restricted access to alcohol and drugs
 - b. Tobacco smoking
 - c. High consumption of fish and meat
 - d. Religion

7. What are the common causes of death in Arctic populations?
 - a. Respiratory diseases
 - b. Circulatory diseases
 - c. Infectious diseases
 - d. Injuries

8. What Arctic Region has the highest population density?
 - a. Oulu
 - b. Komi Republic

- c. Alaska
 - d. Faroe Islands
9. What term is used for the average number of years a new born baby can be expected to live if current mortality trends continue?
- a. Life expectancy
 - b. Infant mortality
 - c. Birth rate
 - d. Death rate
10. Which Arctic region has the highest life expectancy with the lowest gender difference?
- a. Yukon
 - b. Iceland
 - c. Faroe Islands
 - d. Alaska
11. What diseases are associated with the ambient low temperature?
- a. Cold urticaria
 - b. Hepatitis A
 - c. Cataract
 - d. Frostbites
12. What diseases are water-born diseases?
- a. Trachoma
 - b. Campylobacteriosis
 - c. Giardiasis
 - d. Shigellosis
13. What reactions can occur to cold temperature?
- a. Normal reaction
 - b. Hyperreactions
 - c. Hyporeactions
 - d. No reaction
14. What is the main cause of botulism among northern indigenous populations?
- a. Contaminated traditional fermented aquatic game foods
 - b. Drinking water
 - c. Soil
 - d. Fresh fruits and vegetables
15. What human tissues are used for biomonitoring of chemical contaminants?
- a. Blood
 - b. Breast milk
 - c. Hair
 - d. Urine
16. What are the potential water threats determined by the WHO?
- a. Naturally occurring chemicals
 - b. Chemicals from industrial sources and human dwellings
 - c. Chemicals from agriculture

- d. Chemicals used in water treatment or materials in contact with drinking water
17. What kind of traditional food is the most exposure to organochlorines in southwestern Greenland?
- a. Fish
 - b. Seal
 - c. Whale
 - d. Birds
18. What kinds of traditional food are recommended for unlimited use taking into account the concentrations of persistent toxic substances in the North of Russia?
- a. Whale meat
 - b. Reindeer kidney
 - c. Hare liver
 - d. Tundra birds fat
19. Which Arctic regions have the highest crude tuberculosis incidence rate per 100 000 population?
- a. Greenland
 - b. Yukon
 - c. Nunavut
 - d. Alaska
20. What factors may alter the habitat of Ixodes ticks?
- a. Wind speed
 - b. Precipitations
 - c. Humidity
 - d. Warmer temperature
21. Waterborne diseases are contracted the same way as water-wash disease
- a. True
 - b. False
22. Antibiotics are effectively used to treat viral infections in Arctic communities.
- a. True
 - b. False
23. Most circumpolar animal viruses cause human infections.
- a. True
 - b. False
24. Waterborne pathogens relevant to Arctic regions include viral, bacterial, protozoan and helminth members.
- a. True
 - b. False
25. Risk is a function of disease and snowmelt.
- a. True
 - b. False

26. Centralized supplied community drinking water and sewage treatment is the only solution for safe water services in circumpolar communities.
- True
 - False
27. Lake water harvest through surface ice in a community
- Is free from enteric pathogens under all conditions
 - Is safe for non-potable uses
 - Is most likely to be impacted by enteric viruses than other pathogens
 - Is always safe if free from coliforms
28. Antimicrobial resistant (AMR)
- Is more common amongst sewage bacteria than natural environmental bacteria
 - Is carried on genes that can be transferred across different bacterial species
 - Can be increased by poor disinfection of water
 - Is only an animal problem
29. QMRA
- Is a qualitative process to address the likelihood x consequence of pathogen exposures
 - Consists of four main steps (problem formulation, exposure assessment, dose-response assessment, risk characterization)
 - Can be used to set water treatment requirements
 - Has its origins in production of astronaut food
30. Circumpolar infectious diseases
- Are dominated by gastrointestinal infections
 - Include respiratory and skin infections
 - Are only caused by bacteria
 - Include stomach cancer
31. The provision of utilities in cold regions is more difficult due to:
- Small populations
 - Extended periods of low temperatures
 - Frozen ground conditions
 - Limited site access
 - All of the above
32. In cold regions large amounts of energy are used to attain adequate living standards.
- True
 - False
33. The level of sanitation in most of the smaller cold region communities is generally more primitive than comparably sized southern communities.
- True
 - False
34. The main difference between temperate and cold region design in wastewater treatment relates to which of the following:
- Low receiving water temperature
 - Low assimilative capacity of the environment

- c. Low dissolved oxygen in the winter below the ice
- d. High dissolved oxygen in the winter below the ice
- e. All of the above

35. Studies have shown that improvement in municipal services in cold region communities have brought improvements in health.

- a. True
- b. False

36. The design engineer does not need to be concerned about the effect and impact of general warming trends on cold region structures and facilities associated with global climate change. –

- a. True
- b. False

37. Which one of the following are not arctic water distribution systems?

- a. deep bury
- b. pit orifice or single main recirculating
- c. slow main – distributed pumping
- d. two pipe, pressure differential
- e. three pipe reverse return system

38. Water security can be most properly defined as:

- a. Having enough water to drink
- b. Not having the ability to afford water
- c. The ability to access and benefit from affordable, adequate, reliable and safe water to meet all domestic, health, and cultural needs

39. In Alaska, there is a particular problem with access to in rural villages:

- a. Adequate amounts of water delivered to the home
- b. Clean drinking water
- c. Local water sources

40. Examples of “water-washed” (versus “water borne”) diseases DO NOT include:

- a. Respiratory diseases
- b. Skin diseases
- c. Diarrheal diseases

41. Which could be the major pathway for POPs (persistent organic pollutants) to enter the Arctic?

- a. River current
- b. Ocean current
- c. Air flow

42. There are two groups of POPs, the flyer and the swimmer. Among the chemicals listed below, which one is flyer?

- a. $\text{C}_{10}\text{-HCH}$,
- b. $\text{C}_{12}\text{-HCH}$,

c. BDE-209

43. What is the direct evidence to support the major pathway for α -HCH to enter the Arctic?

- a. The spatial trend of α -HCH concentrations in ocean water,
- b. The link between α -HCH concentrations in Arctic air and its global emissions,
- c. The concentrations of α -HCH in ringed seal bubbles

44. Did the different pathways for α - and β -HCHs affect profiles of these 2 chemicals in Arctic biota?

- a. Yes
- b. No

45. True/False

Considering health education and community outreach as part of water management and rural sanitation improvement efforts is a new idea. False

46. True/False

Social marketing is the same as social media. False

47. True/False

There is no science or theories involved in understanding or changing human behavior. False

48. True/False

Technical expertise is the most important and relevant kind of knowledge. False

For the following, choose all (1-4) that apply:

49. Social marketing

- a) is an outcome of community outreach
- b) is a process that uses marketing principles and techniques
- c) influences target audience behaviors
- d) benefits only the individuals involved

50. Behavior changes that are possible foci of social marketing include

- a) Reject/abandon
- b) modify
- c) accept
- d) continue

51. Community Based Participatory Research (CBPR) is

- a) more about practice than science
- b) an approach that includes formalized structures to ensure community input

- c) usually focused on research topics of interest to the community
- d) the same as community-placed research

52. Principles of CBPR include

- a) recognition of community as unit of identity
- b) builds on strengths and resources
- c) facilitates partnership in all phases
- d) promotes co-learning and capacity building

53. Potential benefits of CBPR include

- a) is more efficient in time and resources
- b) ensures cultural and local competence/relevance
- c) enhances fit and productivity of interventions
- d) addresses concerns about manipulation and distrust of outsiders

54. Communication for social change

- a) emphasizes dialogue and debate over persuasion and transmission of outside technical expertise
- b) focuses on individual behavior change over social norms and policies
- c) gives 'voice' to those typically unheard
- d) promotes sustainability of interventions with local 'control' of process and outcomes