WAKISSHA JOINT MOCK EXAMINATIONS 2015
UGANDA ADVANCED CERTIFICATE OF EDUCATION
MARKING GUIDE
P640/1
FOODS AND NUTRITION
(With science in the home)
PAPER 1
JULY/AUGUST 2015

1. (i) Prolonged use of broad spectrum antibiotic results in to death of industrial bacterial

and as such there is no synthesis of vitamin K which plays a very important role in blood clothing activating prothronbin to thrombin.

(3marks)

(ii) In absence of vitamin E (an anti-oxidant) high oxygen tensions especially in the lung capillaries cause oxidation of poly unsaturated fatty acids in the red blood cells causing hemolysis which can result in to anemia.

(4marks)

(iii) Alcoholism results in to mal absorption of vitamin B (thiamine) across the gastroinlestinal tract. Thiamine helps brain cells to respire and produce energy from sugar. Absence of thiamine due to alcoholism results into Inadequate generation of energy for the brain cells so as function property which results into KorsakoffsSynclome.

(4marks)

(b) Properties.

- White odourles crystalline compound.
- Soluble in water and alcohol.
- It is stable in heat in a wide conditions.
- Destroyed by light.

(4marks)

Functions.

- Essential in synthesis of non-essential amino acid (transamination).
- Antibody production.
- Production of energy.
- Protein metabolism.

(4marks)

(c)

Pernicious Anemia	**Microcytic Anemia**
- Lack of vitamin B_{12}	- Caused by iron deficiency.
- Red blood cells are large.	- Red blood cells are small.
- Managed by vitamin B_{12} infection	- Managed by iron by iron supplements in food.

2. (a) (i) When the temperature are high bacterial survival is low only spores survive,

decreasing temperatures increases the survival of bacteria. Most thrive between 30^0C AND 40^0C. At refrigeration temperature the bacteria (germs) survive.

(4marks)

(ii) Most bacteria are destroyed at temperatures over 60^0C because enzymes in them are denatured. However spores survive because of their hard coats (capsules) which protects them.
Cold temperatures (O^OC to 10^OC) retard growth of bacteria because enzymes in them are inactive hence they are not destroyed. Temperatures between 40^0C and 18^0C allows much survival because it's conducive for enzyme action.

(4marks)

(b) Ways in which bacteria infect food.
- On the farm milking partour hen butleries, ground fruits etc.
- Through transport. Tracks carrying animals are covered with dung and Urine.
- Contact: infected animals pass on bacteria to un infected through contact close contact also causes stress which lowers animals resistance to infection.
- Abattoirs and poultry plants. Disease is easily spread in live animals or carcasses through handling of one contaminated animal.
- Meat production: Mincers conyer belts and utensils may become contaminate and then contaminate other foods.
- Shops, supermarkets and catering establishments. Cooked and raw foods all prepared on the same surfaces.
- Organic waste e.g. food, plants, feelings etc.
- Inorganic waste such as cans, polythene, plastic. Ways of disposal.
- Recycling when it is necessary.
- Disposal e.g. trucks which … and deposit refuse elsewhere.
- Waste disposal units such as electric waste disposal units which fit into the sink outlet.
- Kitchen bins.
- Dust bins.
- Incinerator
- Sewage disposal.

(8 marks)

3. (a) (i) Cause & symptoms of NIDDM.
Causes
- Reduced receptors.
- Obesity
- Inability for cells to metabolism glucose.

(3marks)

Symptoms
- Polyuria.
- Polyolipsia.
- Polygleamia

(3marks)

(ii) Treatment;
- Dietary treatment i.e. diet low in Kilocalories, & weight loss diet.

- Exercise or being Active.
- Administer oral hyperglycemic drugs e.g. Insulin.

(3marks)

(b) Factors that result into obesity.
- Lack of exercise and sedentary life.
- Social and cultural factors which view obese people as beautiful & presentable.
- People eat to sality need not hunger.
- Stress & other emotions which are expressed through increased eating.
- Genetic …….
- Hormonal imbalances.
- Physiological states of body e.g. pregnant women.
- Eating too much.
- Boredom, habit or addition.
- Lack of nutritional education.
- Poverty.

@ 1mark
8Marks

(c) Anorexia nervosa is a self-starvation syndrome characterized by server disruption of a persons eating behavior. (2marks)
Causes.
- Emotional shock or grief.
- Fear of growing up.
- Unhappy childhood.
- Unhappiness about body size and shape.
- Need to control one's life.
- Unhappy relationship within the family.

@ 1mark 6 Marks
TOTAL 8MARKS

SECTION B

4 (a) (i) Why cold food is popular.
- Visual appeal, when served attractively stimulate appetite e.g. salads.
- Add variety to menu.
- Efficiency; can be served in advance, in a short time and self-served.
- Produce variety of flavour and textures.
- Versatility of served from a buffet, the range of foods can be from simple or complex depending on the type of occasion.

@ 1mark
6marks

(ii) Technique involved in cold food preparation.
- Peeling.
- Chopping.
- Cutting.
- Carving.
- Seasoning.
- Dressing.
- Blending.

- Whisking.
- Garnishing.
- Marinading.

Well explained

Any 8 points 8Marks @1mark

(c) Preparation of salads.
- Wash fruits and vegetables.
- Ensure variety in colour and texture.
- Chop lightly of the required size.
- Should be served attractively.
- Don't prepare too long in advance unavoidable refrigerate.
- Use stainless steel equipment when stiang or chopping.
- Use dressing to minimise loss of nutrients.

5. (a) Planning meals for the elderly.
- Provide normal body building foods, protective food and less energy giving foods.
- Food should be well cooked and tender so as it is easy to digest.
- Avoid fatty and greasy foods.
- Consider tastes and preferences.
- Provide dishes which are rich in minerals e.g. calcium, phosphorous, iron, iodine & vitamin A,D, C.
- Serve balanced diets.
- Serve attractively in dainy, serving dishes well garnished.

Any 7points @ 1mark
7marks

(b) Preparation of Muffins.
Ingredients.
- Flour
- Margarine/butter.
- Sugar.
- Eggs.
- Milk.
- Baking powder.

2marks

Procedure: baking
- Sieve flour, and sugar separately;
- Rub fat into the flour together with baking powder until the mixture is like bread crumbs;
- Mix/stir in the sugar using wooden spoon;
- Add in egg and mix;
- Add in the milk until the mixture is lumpy;
- Grease the cupcake baking tins and spoon in the; mixture.

- Bake in a moderate oven;

@1mark
TOTAL = 7MARKS

(c) (i) Reasons for table Etiquettes.
- To avoid accidents
- To harness a feeling of unity.
- To avoid contamination of food.
- So as to avoid wastage.
- To ensure good storage and preservation of food.

Any 4 point
4marks

(ii) Table etiquettes.
- Do not talk while eating.
- Do not stand while eating
- Do not lough or sneeze on the table.
- Do not glance in to other people's plate while eating.
- Eat what is in front of you.
- Ask for what you cannot reach.
- Serve only what you can finish.
- Eat systematically from first course through second course to the third.
- Do not open month during chewing.
- Finish and leave the eating table together with others.
- Do not belch open mouth on eating table

Any 7 @ 1mark
7marks

6. (a) (i) Sugar Extraction.
- Sugar Beet is harvested and brought to the processing plant where it's washed and sliced;
- Slices are soaked in hot water to allow diffusing of sugar into the water;
- The sugar solution is mixed with lime and carbon dioxide gas passed through which precipitates the impurities;
- Precipitates are filtered off and the juice is boiled to evaporate much of water concentrating the solution;
- The sugar is crystallized in special vacuum pans;
- Crystals are separated from the liquid by cintrifnging the mixture;
- Crystals are bleached with charcoal and finely dried within hot air cylinders called granulators and the packed and stored;

@ 1mark
7marks

(ii) Use of sugar in cookery.
- As a sweetener.
- As a preservative.

- As a colourant e.g. Caramel.
- As an enrichment.
- As a lightener.

@ 1mark
Any 4 marks
4marks

(iii) Sugar substitutes.
- Sorbitol.
- Honey
- Saccharine.
- Cyclamate.

@ 1mark
Any 4 marks
4marks

(b) (i) Factors affect flavour and texture of cheese.
- Culture used.
- Method of preparation.
- Time spent in storage (maturity time).
- Draining of whey.
- Temperature and humidity.
- Milk used whether whole or skinned.

@ 1mark
Any 5 marks
5 marks

(ii) How cheese can be rendered digestible.
- Mixing it with starchy foods.
- Grating it finely.
- Chewing it well.
- Apply a little heat (cooking for a short time).
- Add mustard or sodium hydrogen carbonate.

@ 1mark
Any 5 marks
5 marks

END