



SUCCESS KEY TEST SERIES

X- Semi English
(Unit Test-3 Science-2 (ch -7,8))

Science And Technology - II-

DATE:

TIME: 1 hrs

MARKS: 20

SEAT NO:

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Q.1 A) Solve the following questions. (2)

1) State True or False

Stem cells are present in the umbilical cord by which the fetus is joined to the uterus of the mother.

2) The bacteria are useful for cleaning the hydrocarbon and oil pollutants from soil and water.

B) Choose the correct alternative and rewrite the sentence (3)

1) is used as a low calories artificial sweetner.

i. Lactose ii. Sucrose iii. Xylitol iv. Fructose

2) Substance prepared by using dry yeast on commercial basis is -

i. Bread ii. Yoghurt iii. Vinegar iv. Cheese

3) Transplantation human organs act was passed in -

a. 1996 b. 1995 c. 1994 d. 1993

Q.2 Solve the following questions. (Any two) (4)

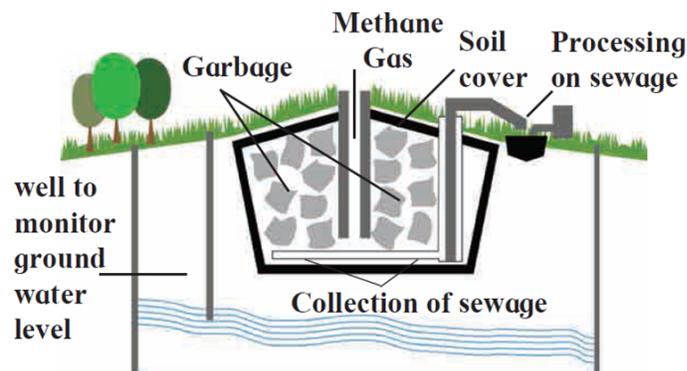
1) Why are Microbial enzymes are used instead of chemical catalysts.

2) Define Applied Microbiology

3) Give any four examples of bacteria used in beverage.

Q.3 Solve the following questions. (Any two) (6)

1)



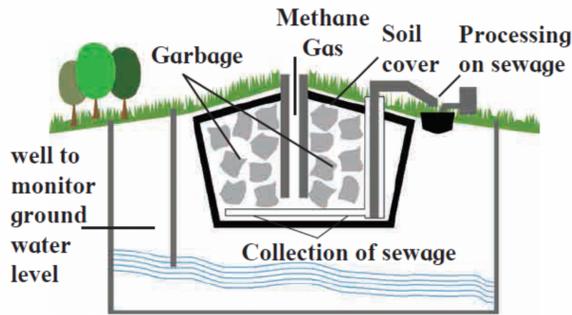
i. What is dumped in the pit ?

ii. Which of the following cannot be used in the above process ? [fruit peels, dry leaves, bottles, plastic bags, cola cans]

iii. How does the decay of the materials take place ?

2) What are the benefits of mixing ethanol with petrol and diesel ?

3)



- i. Identify the process shown in the figure.
- ii. Explain the process in short.

Q.4 Answer in brief (Any one)

(5)

1) Cheese is produced on large scale from the abundantly available cow milk all over the world. First, chemical and microbiological tests of milk are performed. Some colours and microbes like *Lactobacillus lactis*, *Lactobacillus cremoris*, and *Streptococcus thermophilus* are mixed with milk. It imparts sourness to the milk. After this, to impart the dense texture, whey (water in yoghurt) needs to be removed. An enzyme, rennet obtained from alimentary canal of cattle was being traditionally used earlier. However, an enzyme protease obtained from fungi is used at present to produce vegetarian cheese. The whey is separated from yoghurt (which has some other uses). Then, process of production of cheese is started through steps like cutting the solid yoghurt into pieces, washing, rubbing, salting, and mixing of essential microbes, pigments and flavors. Then, cheese is pressed and cut into pieces and stored for ripening.

- i. Give any two microbes used in cheese production. (1)
- ii. Why the cheese is stored? (1)
- iii. What enzyme is used to prepare vegetarian cheese? (1)
- iv. What processes are involved in cheese production? (2)

2) Fill in the given paragraphs

Biotechnology includes following main areas :

- i. Use of various abilities of like yogurt production from milk and alcohol from molasses.
- ii. Use of productivity of the cells. Ex. – Production of antibiotics and vaccines, etc. with the help of specific cells.
- iii. Use of bio-molecules like DNA and proteins in welfare.
- iv. Development of plants, animals and products of desired quality by manipulation. Production of human growth hormone with the help of genetically modified bacteria.
- v. Use of genetic and non-genetic technique. biotechnology involves use of either cell or tissue. Ex. Tissue culture, production of hybrid seeds, etc.

Benefits of Biotechnology :

- i. It has become possible to increase the yield irrespective of the limitations of crop-land area.
- ii. Expenses on control have minimized since development of resistant varieties.
- iii. Due to development of fast fruit setting varieties, per annum has been increased.
- iv. Development of stress resistant varieties which can withstand variable, water-stress, changing of soil, etc. has become possible.