



# VIVEK TUTORIALS

## Preliminary Examination

Std: SSC (E.M)

Date : 30/Jan/2020

Subject: Science & Technology II

Time: 2 Hours

Max Marks: 40

1. It is necessary to solve all the questions.
2. Draw neat and labelled diagrams wherever necessary.
3. Start every new main question on separate page.
4. Figures on the right indicate marks.
5. For each Multiple Choice Question (1.B), ONLY first answer will be considered.
6. Write answer of each MCQ with option number.  
Eg. i) a..... ii) c.....

### Q.1 (A) Choose the proper alternative and fill in the blanks:

5

(1) Spindle fibers attach to which part of the chromosome?  
(a) q-arm of chromosome  
(b) p-arm of chromosome  
(c) Centromere  
(d) Centriole

(2) Which of the following is used in solar cooker to harvest the solar energy?  
(a) Solar panels (b) Silicon cell (c) Mirrors (d) Glass lid

(3) Body organization of unicellular animals is referred as '\_\_\_\_\_ ' organization.  
(a) Protoplasmic grade (b) Cellular grade  
(c) Unicellular grade (d) Cell-atissue grade

(4) What should be done if the gas cylinder at your home catches fire?  
(a) Water should be sprinkled.  
(b) Sand, soil should be put at it.  
(c) Cylinder should be covered with wet blanket.  
(d) One should run away

(5) Ethanol, an alcohol is obtained by fermentation of carbon compounds like fruit juices, maple syrup, sugar molasses, starch of the roots; with the help of yeast \_\_\_\_\_.  
(a) *Saccharomyces bayanus*  
(b) *Saccharomyces Boulardii*  
(c) *Saccharomyces pastorianus*  
(d) *Saccharomyces cerevisiae*

### (B) Attempt the following:

5

#### (1) Find the odd one out:

Edible oil, crude oil, LPG, CNG

1

#### (2) State 'True' or 'False', if 'False' correct it:

1

Restoration is an important link between measures after disaster and national development.

#### (3) Write the correlated terms:

1

Fermentation in yeast : Alcohol :: Fermentation in erythrocytes : \_\_\_\_\_

**(4) Name the following:**

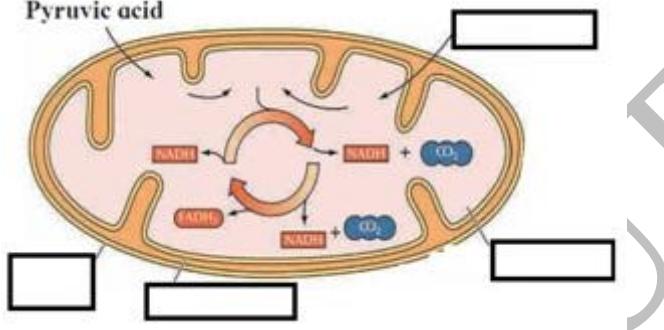
Identify the process shown in the image given below.

**(5) Answer the following in one line:**

In the earlier class, you had prepared the solution of dry yeast for observation of dry yeast. Which substance is prepared by its use on commercial basis?\*

**Q.2(A) Give reasons:(Any Two)**

- (1) Cell division is one of the important properties of cells and organisms.\*
- (2) Only humans can conserve and improve the quality of nature.
- (3) The construction of turbine is different for different types of power plants.\*

**(B) Answer the following:(Any Three)****(1)****(2) Identify the symbols given below and name them.**

A



B

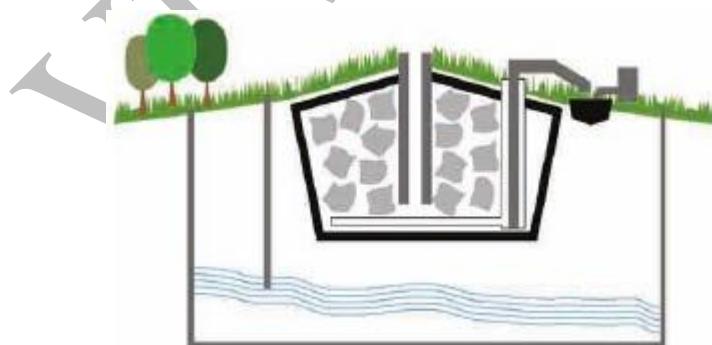


C

**(3) A) Name the following method of solid waste management.**

B) What type of waste is used in this method?

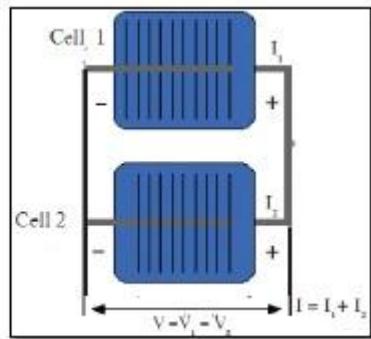
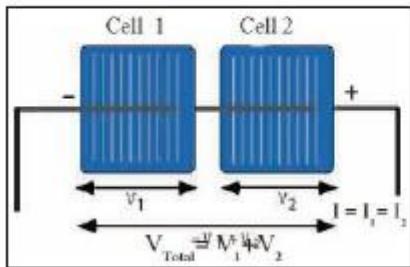
C) What kind of useful substances can be obtained from such methods?



(4) Observe the connections of cells shown in the following images.

i. Which connection will give maximum potential difference?

ii. Give one advantage and one disadvantage of this energy.



(5) Which precautions are necessary for proper decomposition of domestic waste?\*

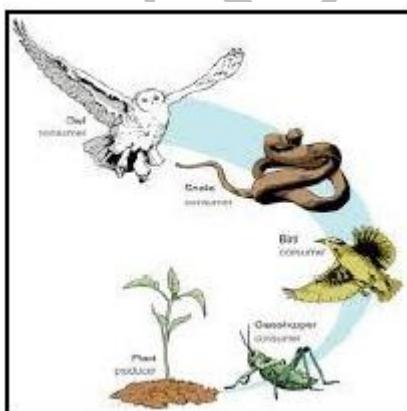
### Q.3 Answer the following:(Any Five)

15

(1) Complete the table given below.

Hormones	Released from	Target cell	Effect
GnRH	----- -----	Anterior pituitary gland	Secretes LH and FSH
LH (LUTENISING HORMONE)	----- ----- ----- ---	Leydig cells in testes	Secretes testosterone
Follicle stimulating hormone (FSH)	Anterior pituitary gland	-----	Make cells more responsive to testosterone
Testosterone	Leydig cells in testes	Sertoli cells in testes	Stimulates ----- -----
Inhibin	----- ----- -----	Anterior pituitary gland	Stops ----- -----

(2) What is shown in the picture? Write name and trophic level of each component.



(3) Write short notes on\* Importance of medicinal plants.

(4) Complete the given table below with appropriate words.

<i>Asexual reproduction</i>	<i>Sexual reproduction</i>
Requires ----- parent.	Requires ----- parents.
Produces offspring ----- --- to parent.	Produces offspring ----- ---from parents.
Can produce many offspring - -----	Requires more ----- and ----- to produce offspring.
Results in -----variation within a species.	Result in ----- variation within a species.

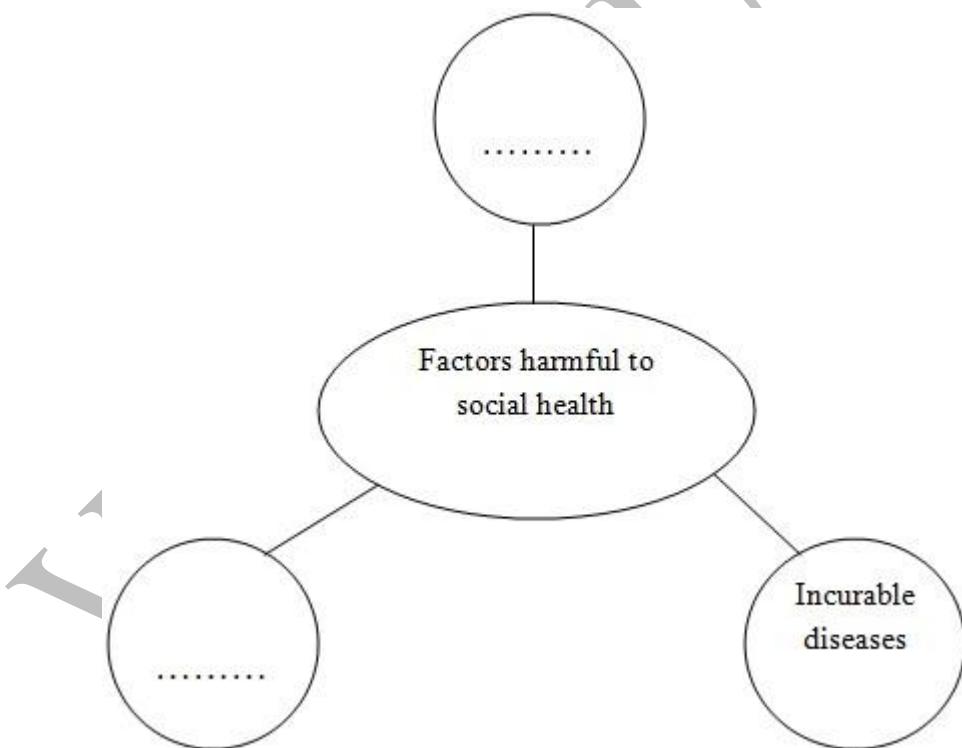
(5) i. Which mental illness is shown in the picture given below?  
ii. Which social message would you like to give through it?



(6) Explain the importance of fruit - processing in human life?\*

(7) Complete the following concept-diagram using factors harming the social health and based on it, answer the following questions.

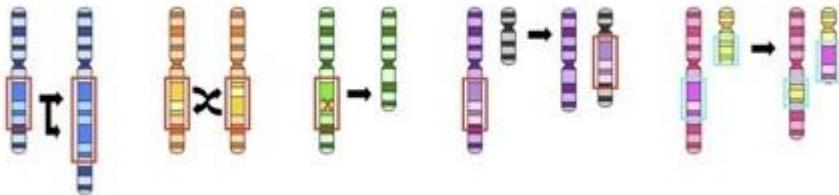
- Tobacco products can be included in which of those factors?
- How the tobacco products are harming the social health?



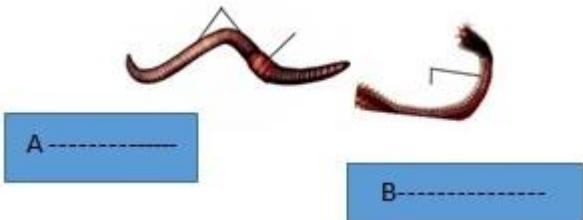
(8) Why is it essential to get the training of first aid?\*

**Q.4 Answer the following:(Any One)**

(1) Identify the type of mutations in the below diagram:



(2) (a) Identify the animals below and write their names:



(b) Label the different parts of each organism shown in the above diagram:

----- All the Best -----