

Time: 2 Hrs

Marks: 40

Q.1 A) Multiple choice Questions.

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- The number of chromosome gets _____ in meiosis.
a) Multiplied b) tripled c) halved d) doubled
- Only two germ layers are formed in
a) Cnidarians b) Aschelminthes c) Platyhelminthes d) Annelids
- Stem cells are present in
a) Umbilical cord b) bone marrow c) adipose connective tissue d) all of the above.
- A clone is produced by fusion of nucleus of somatic cell with an enucleated.
a) Sperm b) ovum c) stem cell d) hepatocyte
- Alcohol consumption affects _____ system.
a) a Digestive b) Nervous c) Excretory d) None of this

B) State True or False.

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- Muscle cells perform aerobic respiration while exercising.
- Asexual reproduction occurs by budding in yeast.
- In thermal solar power plant, solar energy is directly converted into electrical energy.
- Aspartame is used as an artificial sweetener.
- Golden rice produces around 23 times more amount of beta carotene.

Q.2 A) Give scientific reasons. – (Any 2)

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- Morphological evidences suggest that dog, sheep and wolf have a common origin.
- Overcoming pollution is a powerful way of environmental management. Justify
- What will you do if the child of your neighbour is addicted to tobacco chewing? Why?

B) Answer the following. – (Any 3)

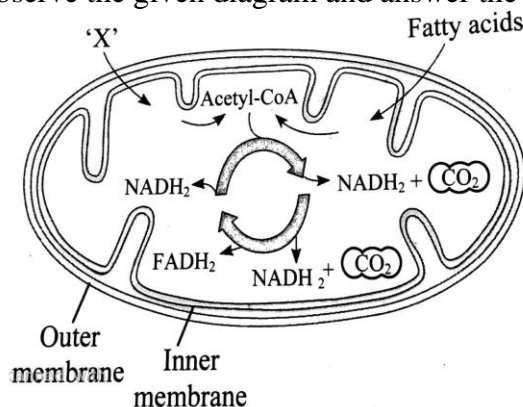
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- Explain how ATP is formed through the electron transport chain.
- State any four effects of radioactive pollution.
- Explain briefly how animals can be classified based on body symmetry.
- List down the steps involved in the production of cheese once the whey is separated from yoghurt.
- Write a note on Disaster Management Act, 2005

Q.3 Answer the following. – (Any 5)

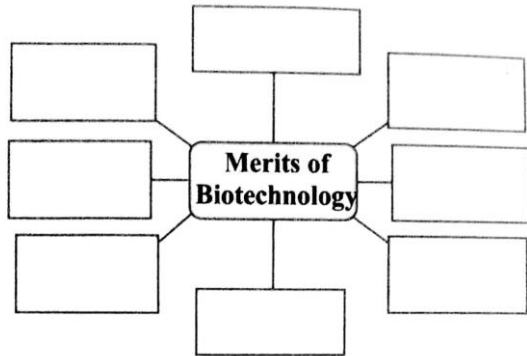
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- Write a note on 'transcription'.
- Observe the given diagram and answer the questions given below it.



- Mention the cell organelle shown in the diagram
 - Which energy rich molecules are synthesized during Krebs cycle?
 - Identify the compound 'X' which is product of glycolysis that is utilize in Krebs cycle.
- Explain in detail the different levels of biodiversity.
 - State the characteristics of the members of class Pisces.

- 5) Fill in the blanks by selecting the correct word from the brackets and complete the given paragraphs
 (characteristic test, Lactobacilli, Xanthomonas spp, lactic acid, dense consistency, acetic acid, 2:1, Streptococcus thermophilus, 1:1)
 For preparation of yoghurt, milk is boiled and once it cools to warm temperature, bacteria such as Lactobacillus delbrueckii and _____ are added to it in _____ proportion. _____ its formed due to Streptococcus that makes the protein to get out and thus give _____ to the yoghurt. Acetaldehyde like compounds are formed due to _____ that gives _____ to the yoghurt.
- 6) Complete the following chart.

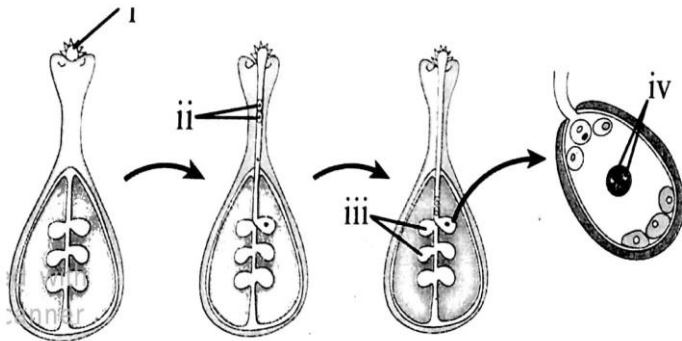


- 7) Give three examples of activities under the jurisdiction of cyber crime laws.
 8) Mock drill is useful. Explain.

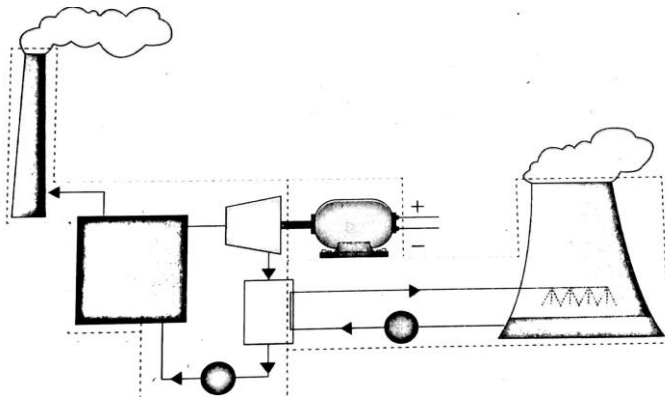
Q.4 Answer the following. – (Any 1)

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- 1) Identify the labels (i, ii, iii, iv) and explain the process represented in the given diagram.



2)



- i) The schematic of which power plant is shown in diagram?
 ii) What is the fuel used in the plant?
 iii) State any one problem caused due to power generation using this power plant.
 iv) Draw the flow chart showing the generation of electricity in the power plant.
 v) Draw the flow chart for the transformation of energy in the power plant.