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**Section : B**

**Paper : Microbiology**

**Deprement : MLT**

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 **Qno 1::**

**Ans :**

 **1) .Microorganisms ..... are living things which individually are too small to be seen with naked eye.**

**2) The scientific study of algea is called Phycology.**

**3) Diseases causing living organisms are known as Phathogenesis.**

**4) .Ribosome cell organelle is present both in prokaryotic and eukaryotic**

**Cell.**

**5) The power house of cell is known as Mitochondria.**

**6) Binary fission is the most common method of asexual reproduction in Microbes.**

**7) Log period bacterial growth is also known as Logarithmic.**

**8) Log phase of Microbial growth is metabolically active**

**and is for individuals purposes.**

**9) Shrinkage of cell's plasma membrane caused by osmotic loss of water**

**is called Plasmolysis.**

**10) Forum synthesis of cellular material nitrogen and sulfur**

**is needed for protien synthesis.**

**Qno2 ::**

**Ans :**

Mitochondria

Mitochondria are found in eukaryotic cells. Thayer are

bounded by a double members. The outer members is

Smooth. The inner member is folded inwards, giving

rise to extension called Cristae . Cristae increase the

surface area on which respiratory process takes

Place. Mitochondria are the power house of cell

because they carry out respiration in cell and

Products energy in the form of part of a cell is

the Nucleus.

Nucleus

It is present in the center of the

animal cell .In mature Plant cells, It is pushed to

the side due to the presence of large central

vacuole. The Nucleus is bounded by a double

membrane,called nuclear envelope. Inside

Nucleus,there is a granular matrix called

nucleoplasm in which one or

 Growth factors

 Essential organic compounds an organism

is unable to synthesize,they must be directly

 obtained from the environment.Growth factors typically act as signaling molecules

 between cells.Example. Amino acid, purines,anmd pyrimidines.

Culture media A growth media or culture medium is a solid , liquid

 or semisolid designed to support the growth of microorganism. Nutrient prepared for for the microbes in a lab.

Budding Another from of bacterial division, also asexual reproduction,

 it form outgrowth of mature organism, Budding is a type of

 asexual reproduction in which a new organism develops from an outgrowth or buds due to cell division at one particular site.

**Qno 3 :: what isw bacterial growth ? Discuss different phases**

 **of bacterial growth?Ans ::. Bacterial growth : ?An increase in bacterial numbers**

**– does not refers to an increase in size of the**

 **individual cells. Binary – fission . Most common method of reproduction, asexual.reproduction, splitting of parent cell into two daughter cells. E.coli and staph are two examples of bacteria using binary fission. Phases of growth: 4 phases. 1) lag phase (2) log phase (3) stationary phase (4) death phase   (1). Lag phase : \* period of little or no cell division. \* Can last for 1 hour or several days \* lag phase of the bacterial growth cycles, synthesis of RNA, enzyme and other molecules.  (2). Log phase \* Period of growth also known as logarithmic increase. \* The log phase is a period characterized by cell doubling. \* Some times called as exponential growth phase.  (3). Stationary phase : Period of equilibrium ‘Stationary phase is aporous solid (e.g). glass, silica, or alumina. \* continuous cultyre used in industrial fermentation. (4) Death phase: Also known as logarithmic Decline phase. Some population dies out completely. The final growth phase in a culture, during which nutrients have been depleted and cell number decrease.**