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**Max Time : 1 hr** **Class = 11th Biology Test**  **Max Marks : 30**

**CELL : THE BASIC UNIT OF LIFE**

**[ Mitochondria to Nucleus]**

1. Multiple choice questions : [ 1 X 10 = 10]
2. The solid linear cytoskeletal elements having a diameter of 6 nm and made up of single type of monomer are :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Microtubules | b) Microfilaments | c) Intermediate filament | d) Lamins |

1. The protein present in the axoneme of cilia/flagella, having ATPase activity is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Nexin | b) Dynein | c) Myofibrils | d) tubulin |

1. Cilia and flagella both have :

|  |  |
| --- | --- |
| a) 9 + 2 arrangement of microtubule | b) protective structure of cells |
| c) Only present in protozoa animals | d) Only outgrowth structure of cytoplasm |

1. Number of protofilament in microtubule is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 10 | b) 12 | c) 5 | d) 13 |

1. The leucoplasts that stores fat are called

|  |  |  |  |
| --- | --- | --- | --- |
| a) Amyloplasts | b) Elaioplasts | c) Alueroplasts | d) Proplastids |

1. The bright colour of ripe fruits are due to :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Leucoplasts | b) chloroplast | c) Amyloplasts | d) Chromoplasts |

1. The ribosomes are made up of :

|  |  |  |  |
| --- | --- | --- | --- |
| a) DNA + Protein | b) RNA + Protein | c) DNA + RNA | d) none of these |

1. Nuclear DNA exists as a complex of proteins called \_\_\_\_\_\_ that condenses into \_\_\_\_\_\_ during cellular division.

|  |  |
| --- | --- |
| a) chromosomes , chromatin | b) chromatid , chromosome |
| c) chromatids, chromatin | d) chromatin , chromosomes |

1. Each centriole has a cert wheel organization having a whorl of 9 peripheral fibrils, can be represented with:

|  |  |
| --- | --- |
| a) 9 singlet + 0 central | b) 9 doublet + 0 central |
| c) 9 triplet + 2 central singlet | d) 9 triplet + 0 central |

1. The protein present in the axoneme of cilia/flagella, having ATPase activity is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Nexin | b) Dynein | c) Myofibrils | d) tubulin |

1. What is the diameter of intermediate filament and state their function. [ 2 ]
2. What is the diameter of Microfilament and state their function. [ 2 ]
3. Distinguish between Euchromatin and Heterochromatin. [ 2 ]
4. Why mitochondria is called as power house of the cell? [ 2 ]
5. Draw and explain the arrangement of microtubule in cilia and flagella. [ 3 ]
6. Explain the following structure (i) Nucleus (ii) Nuclear envelope (iii) nucleolus [ 3 ]
7. Define different type of chromosomes on the basis of position of centromere? [ 3 ]
8. Explain the detailed structure of Chloroplast with the help of well labelled diagram. [ 3 ]