

VEER KUNWAR SINGH UNIVERSITY - ARA

B.Sc.

ZOOLOGY (HONOURS) -

PART - III

PAPER - VI

FROM:

DR. RAJESH VERMA  
ASSISTANT PROFESSOR

AND

HEAD - U.G. DEPARTMENT OF ZOOLOGY

D. K. COLLEGE - DUMRAON (BUXAR)

Mobile - NO: 094305-10473

e mail = dr rajesh verma 2020 @ gmail. com .



5/5/2020

CELLULAR ORGANELLES

CYTOPLASM.

B.Sc - PART - III

PAPER - VI

①

Dr. RAJESH VERMA

9430510473 (WhatsApp)

dr.rajesh.verma2020@gmail.com

- o Enclosed by cell membrane
- o Semi fluid substance
- o External to - Nuclear membrane
- o Called also - Non-Nuclear content of Protoplasm

o In Eukaryotes - It contains all the organelles

~~Like - Mitochondria, E.R,~~

① Mitochondria - ATP - for<sup>m</sup>

② E.R - Site for Lipid & Protein synthesis

③ Golgi apparatus → Here proteins are modified, packaged, and sorted in preparation for transport to their cellular destinations

④ Lysosomes & Peroxisomes → Sac of digestive enzymes

→ It carry out intracellular digestion of macromolecules  
Sugar - lipids & protein

⑤ Cytoskeletons - Network of protein fibres that give shape & support to the cells.

⑥ Cytoplasts - Fluid mass that surrounds various organelles.

(2)

### Approximate chemical composition of a typical mammalian cell

Component	Percent of total cell weight
Water	70%
Inorganic ions (Na, K, Mg, Ca, Cl <sup>-</sup> etc)	1%
Miscellaneous small, metabolites	3%
Enzyme ← Proteins (400 A.A)	18%
RNA	1.1%
DNA	0.25%
Phospholipids & other lipids	5%
Polysaccharides	2%

Some enzymes are macromolecules of RNA - called ribozymes

Ribozymes - consist of linear chain of Nucleotide

Cell - obey the laws of - Chemistry & thermodynamics

↓  
By rkt<sup>n</sup> produce - energy

Next Day - For Teaching -

① Carbohydrates

R. V. S. 2020