

## DPP

DAILY PRACTICE PROBLEMS

**Class : XI<sup>th</sup>**  
**Date :**

**Subject : BIOLOGY**  
**DPP No. : 3**

### Topic :- Cell the Unit of Life

- Glycocalyx (mucilage sheath) of a bacterial cell may occur in the form of a loose sheath called ...A... or it may be thick and tough called ...B...  
Choose the correct pair from the given option  
a) A-capsule; B-slime layer  
b) A-slime layer, B-capsule  
c) A-mesosome; B-capsule  
d) A-mesosome, B-slime layer
- Function of rough endoplasmic reticulum is  
a) Fat synthesis  
b) Protein synthesis  
c) Starch synthesis  
d) Autolysis
- Comparing small and large cells, which statement is correct?  
a) Small cells have a small surface area per volume ratio  
b) Exchange rate of nutrients is fast with large cells  
c) Small cells have a large surface area per volume ratio  
d) Exchange rate of nutrients is slow with small cells
- Unicellular organisms are  
a) Not capable of independent existence because they cannot perform all the essential functions of life  
b) Not capable of independent existence but they can perform all the essential functions of life  
c) Capable of independent existence and can perform all the essential vital functions  
d) Capable to lead independent existence but they perform few vital functions of life
- Stain used by Feulgen to stain DNA is  
a) Janus green  
b) Basic fuchsin  
c) Crystal violet  
d) Methylene blue
- Out of A-T, G-C pairing, bases of DNA may exist in alternate valency state owing to arrangements called  
a) Tautomerisational mutation  
b) Analogue substitution  
c) Point mutation  
d) Frameshift mutation
- Robert Hooke used the term cell in the year  
a) 1650  
b) 1665  
c) 1865  
d) 1960
- Okazaki fragments are produced during the synthesis of  
a) mRNA  
b) Protein  
c) tRNA  
d) DNA
- Cellulose, the most important constituent of plant cell wall is made up of  
a) Branched chain of glucose molecules linked by  $\alpha$  1-6 glycosidic bond at the site of branching  
b) Unbranched chain of glucose molecules linked by  $\alpha$ , 1-4 glycosidic bond  
c) Branched chain of glucose molecules linked by  $\beta$ , 1-4 glycosidic bond in straight chain and  $\alpha$ , 1-6 glycosidic bond at the site of branching  
d) Unbranched chain of glucose molecules linked by  $\beta$ , 1-4 glycosidic bond

10. In flagella membrane, which enzyme catalysis ATP activity?  
 a) Cytoplasmic dyenin    b) Asconic dynein    c) Kinesis    d) Myosin
11. During the replication of DNA, the synthesis of DNA on lagging strand takes place in segments. These segments are called  
 a) Double helix segments    b) Satellite segments  
 c) Kornberg segments    d) Okazaki segments
12. In DNA of certain organisms, guanine constitutes 20% of the bases. What percentage of the bases would be adenine?  
 a) 0%    b) 10%    c) 20%    d) 30%
13. The term 'protoplasm' was coined by  
 a) Virchow    b) Purkinje    c) Dujardin    d) Kolliker
14. Select the incorrect statement  
 a) Robert Brown discovered cell  
 b) Antony von Leeuwenhoek first saw and described a living cell  
 c) Cell is the basic unit of structure and function of all organisms  
 d) Anything less than a complete structure of a cell do not ensure independent living
15. Which of the following is responsible for the origin of lysosome?  
 a) Chloroplast    b) Mitochondria    c) Golgi body    d) Ribosome
16. In his bacteriophage experiments, Hershey and Chase demonstrated that DNA is genetic material in  
 a) TMV    b) *Escherichia coli*  
 c) *T<sub>2</sub>* bacteriophage    d) *Diplococcus pneumoniae*
17. The length of DNA molecule greatly exceeds the dimensions of the nucleus in eukaryotic cells. How is this DNA accommodated?  
 a) Deletion of non-essential genes    b) Super-coiling in nucleosomes  
 c) DNA se digestion    d) Through elimination of repetitive DNA
18. Diameter of DNA is constant due to  
 a) Hydrogen bonds between base pairs    b) Phosphodiester bond  
 c) Disulphide bond    d) Covalent bonds
19. Which of the following sugars is found in nucleic acid?  
 a) Dextrose    b) Glucose    c) Levulose    d) Deoxyribose
20. Categorise the given statements as true and false  
 I. Kingdom - Monera have eukaryotic organisation  
 II. *E. coli* is a eukaryote  
 III. Organised nucleus is present in eukaryotes  
 IV. *Paramecium* is a prokaryote  
 a) T, T, F, F    b) F, F, T, T    c) F, F, T, F    d) T, T, T, F