

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018
(First Semester)

Branch-ZOOLOGY

CELL BIOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

The magnification strength of a compound microscope is .

- (i) 50-100 x (ii) 100-200 x
(iii) 200-300 x (iv) 100- 400 x

The longest phase in the cell cycle is .

- (i) G1-phase (ii) G2-phase
(iii) S-phase (iv) M-phase

Fluid mosaic model for plasma membrane was proposed by .

- (i) Danielli- Davson (ii) Benson & Roberson
(iii) Singer & Nicolson (iv) Green & Wolper

The movement of substances against a concentration gradient is known as

- (i) Passive transport (ii) Active transport
(iii) Diffusion (iv) Absorption

Which of the following is the site of cellular respiration in cells?

- (i) Ribosomes (ii) Golgi complex
(iii) Mitochondria (iv) Nucleus

The main function of centrosome in a cell is.

- (i) Initiation of cell division (ii) Inhibition of cell division
(iii) Keeping the nucleus in the centre of the cell
(iv) Initiating the protein synthesis

Chromosomes with two unequal arms is known as.

- (i) Acrocentric (ii) Telocentric
(iii) Submetacentric (iv) Metacentric

Semi-conservative method of DNA replication was proposed by

- (i) Watson & Crick (ii) Jacob & Monad
(iii) Covalieri & Rosenberg (iv) Claude & Palade

Which one of the following is a programmed cell death?

- (i) Aging (ii) Chemotherapy
(iii) Radiation (iv) Apoptosis

10 Tumour suppressor genes are negative regulators of

- (i) Remedial genes (ii) Onco genes
(iii) Antisense genes (iv) All-the above

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

- 11 a Narrate the structure and applications of Phase - contrast microscope.
OR
b Describe the mitotic cell division and its significance.
- 12 a Analyze the structure and functions of Ribosomes.
OR *
b Summarize the functions of Lysosomes.
- 13 a Describe the Ultra structure of Interphase nucleus with a neat sketch.
OR
b Bring out the bioenergetics process of Kreb's cycle in Mitochondria.
- 14 a Explain the structure and significance of polytene chromosomes.
OR
b Narrate the physio- chemical structure of DNA.
- 15 a Bring out the characteristics of cancer cells.
OR
b What is cancer? Summarize the cellular functions of Oncoproteins.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Electron microscope is a boon to cell biology- Discuss.
- 17 Analyse the ultra structure and functions of Golgi bodies.
- 18 Elucidate the structure and functions of Endoplasmic reticulum.
- 19 Highlight the role of RNA and Ribosomes in proteing synthesis.
- 20 Discuss the process of Apoptosis and add a note on its significance.

Z-Z-Z

END