Seat No:_____ Enrollment No:_____

PARUL UNIVERSITY

FACULTY OF APPLIED SCIENCE

M.Sc., Summer 2018-19 Examination

Semester: 1 **Date: 02/04/2019**
Subject Code: 11201101 **Time: 10.30 am to 1.00 pm**
Subject Name: Principles of Cell Biology **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1. A) Essay type (Each of 04 marks) **(08)**
(a) Brief the molecular events occur in cell cycle check points.
(b) Explain the role of Golgi in protein secretion

Q.1. B) Answer the following questions (Any two)
(a) Short note (Each of 02 marks) **(04)**
1.Define active transport give one example
2.Define Passive transport give one example
(b) Short note on cell-cell interactions **(04)**
(c) Short note on mechanism of cell division **(04)**

Q.2. A) Answer the following questions.
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) **(04)**
1. Draw and label the typical structure of animal cell
2. Write the functions of lysosomes
(b) Short note on ultrastructure of plasma membrane and their components **(04)**

Q.2. B) Answer the following questions (Any two)
(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**
1. Function of detoxifying harmful drugs from body is done by _____
A. smooth endoplasmic reticulum B. rough endoplasmic reticulum
C. smooth exoplasmic reticulum D. rough exoplasmic reticulum
2. Phagocytosed food is digested with help of enzymes which are present in _____
A. Ribosome B. lysosomes
C. mitochondria D. Golgi complex
3. Substances are allowed to pass through cell membrane to maintain a constant _____
A. Concentration B. Gradient
C. temperature D. pH
(b) Short note on Exo and endocytosis **(03)**
(c) Short note on functions of cell organelles **(03)**

Q.3. A) Essay type (Each of 04 marks) **(08)**
(a) Explain the photosynthesis along with photophosphorylation
(b) Differentiate micro, macro and mega evolution

Q.3. B) Answer the following questions (Any two)
(a) Short note (Each of 02 marks) **(04)**
1. Draw and label the structure of mitochondria
2. Make a note on Origin of life
(b) Short note on carbon dioxide fixation in CAM plants **(04)**
(c) Short note on Natural Selection **(04)**

Q.4. A) Answer the following questions.
(a) Short note (Each of 02 marks) **(04)**
1. Draw and label the ultrastucture of Chloroplast
2. Role of Enzymatic compartmentalization of mitochondria
(b) Short note on Synthetic theory of evolution with one example **(04)**

Q.4. B) Answer the following questions (Any two)

(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**

1. The evolutionary idea was proposed by _____

A. Charles Darwin B. August Weismann

C. J.G.Mendal D. Lawmark

2. Which plant is more productive in C3 and C4 cycles.

A. C3 B. CAM

C. C4 D. All of these

3. Give two examples for CAM plants.

(b) Short note on species concept **(03)**

(c) Short note on photorespiration **(03)**

PARUL UNIVERSITY

FACULTY OF APPLIED SCIENCE

M.Sc., Winter 2017-18 Examination

KEY

Semester: 1 **Date: (dd/mm/yyyy)**

Subject Code: 11201101 **Time: (2hr:30min)**

Subject Name: Principles of Cell Biology **Total Marks: 60**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1. A)	**Essay type (Each of 04 marks)**	**(08)**
	(a) Brief the molecular events occur in cell cycle check points.	
	(b) Explain the role of Golgi in protein secretion	
Q.1. B)	**Answer the following questions (Any two)**	
	(a) Short note (Each of 02 marks)	**(04)**
	1.Define active transport give one example	
	2.Define Passive transport give one example	
	(b) Short note on cell-cell interactions	**(04)**
	(c) Short note on mechanism of cell division	**(04)**
Q.2. A)	**Answer the following questions.**	
	(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks)	**(04)**
	1. Draw and label the typical structure of animal cell	
	2. Write the functions of lysosomes	
	(b) Short note on ultrastructure of plasma membrane and their components	**(04)**
Q.2. B)	**Answer the following questions (Any two)**	
	(a) Short note/ Multiple choice questions. (Each of 01 marks)	**(03)**
	1. Function of detoxifying harmful drugs from body is done by _____ A. **smooth endoplasmic reticulum** B. rough endoplasmic reticulum C. smooth exoplasmic reticulum D. rough exoplasmic reticulum	
	2. Phagocytosed food is digested with help of enzymes which are present in _____ B. Ribosome B. **lysosomes** C. mitochondria D. Golgi complex	
	3. Substances are allowed to pass through cell membrane to maintain a constant _____ B. Concentration B. **Gradient** C. temperature D. pH	
	(b) Short note on Exo and endocytosis	**(03)**
	(c) Short note on functions of cell organelles	**(03)**
Q.3. A)	**Essay type (Each of 04 marks)**	**(08)**
	(a) Explain the photosynthesis along with photophosphorylation	
	(b) Differentiate micro, macro and mega evolution	
Q.3. B)	**Answer the following questions (Any two)**	
	(a) Short note (Each of 02 marks)	**(04)**
	1. Draw and label the structure of mitochondria	
	2. Make a note on Origin of life	
	(b) Short note on carbon dioxide fixation in CAM plants	**(04)**
	(c) Short note on Natural Selection	**(04)**
Q.4. A)	**Answer the following questions.**	
	(a) Short note (Each of 02 marks)	**(04)**

	1. Draw and label the ultrastucture of Chloroplast	
	2. Role of Enzymatic compartmentalization of mitochondria	
	(b) Short note on Synthetic theory of evolution with one example	**(04)**
Q.4. B)	**Answer the following questions (Any two)**	
	(a) Short note/ Multiple choice questions. (Each of 01 marks)	**(03)**
	1. The evolutionary idea was proposed by _____ A. **Charles Darwin** B. August Weismann C. J.G.Mendal D. Lawmark	
	2. Which plant is more productive in C3 and C4 cycles. A. C3 B. CAM C. **C4** D. All of these	
	3. Give two examples for CAM plants. Cactus, euphorbia, some orchids	
	(b) Short note on species concept	**(03)**
	(c) Short note on photorespiration	**(03)**