

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2020

Subject Name: Cell Biology

Subject Code: 4SC01CEB1

Branch: B.Sc. (Chemistry, Microbiology)

Semester: 1

Date: 10/03/2021

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1	Attempt the following questions:	(14)
a	These are true stem cells, with the potential to make any differentiated cell in the body known as, _____ . A) Pluripotent cells B) Totipotent cells C) Multipotent cells D) Unspecialized cells	1
b	Define: Cancer	1
c	_____ Cancer can spread from the original site and cause secondary tumors.	1
d	Define: Protein Targeting	1
e	From the ER exit sites the vesicles are COPII and COPI coated. True or False?	1
f	Which of the following is function of RER? A) Surface for Ribosomes B) Surface for lipid synthesis C) Formation of Glycogen D) Metabolism of precursors	1
g	Which one of the following of is not consider as second messenger? A) Inositol diphosphate B) cyclic AMP C) cyclic GMP_ D)_Calcium	1
h	Define: Cell singling	1
i	Tightly packed form of chromatin that takes up permanent deep stain during interphase and prophase but metaphase takes up light stain is known as, _____ . A) Euchromatin B) Heterochromatin C) Constitutive heterochromatin D)Facultative Heterochromatin	1
j	Define: Nuclear Pore	1
k	Enlist Structural organization of cell.	1
l	Which of the following is function of cell wall? A) Take part in protein synthesis. B) Movement of cells.	1



- C) Protect cells against osmotic shock and physical damage.
 D) All of the above
- m Movement of a single molecule in opposite direction is known as _____. 1
 A) Uniport B) Symport
 C) Antiport D) multiport
- n Microtubules participate in the intracellular transport of organelles and vesicles. 1
 True or False?

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- a Write down a detail note on structure and function of plasma membrane. (with diagram) (7)
- b Write a detail note on types of chromatin and its organization. (7)
- Q-3 Attempt all questions (14)**
- a What is the role of Glycosylation in protein structure and detail note on types of glycosylation? (7)
- b What are secondary messengers? Write a short note on Cyclic AMP pathway. (7)
- Q-4 Attempt all questions (14)**
- a Write a detail note on Mitotic and Meiotic type of cell division. (7)
- b Write a short note on Cytoskeleton with types of filaments associated. (7)
- Q-5 Attempt all questions (14)**
- a Difference between plant cell and animal cell (5)
- b Write a detail structural note on Nuclear Pore Complex (5)
- c Detail note on Protein structure with diagram (4)
- Q-6 Attempt all questions (14)**
- a Write a down detail note on intracellular signaling. (7)
- b Briefly describe the types, causes & development of cancer. (7)
- Q-7 Attempt all questions (14)**
- a Enlist the structure of nucleus. Write a detail note on structure of nuclear envelops and function of nucleus. (7)
- b What are stem cells? Write a detail note on Embryonic stem cell. (7)
- Q-8 Attempt all questions (14)**
- a Export of proteins and lipids from ER towards Golgi apparatus with diagram. (7)
- b What are cell surface receptors? Write down Function of cell surface receptors. (7)

