

Nov. 21

Roll Number \_\_\_\_\_ (Total Number of Questions 09) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	1 <sup>st</sup>
Subject	Remedial Biology
Subject Code	BP106RBT
Paper ID	74649
Time	1.5 Hours
Maximum Marks	35
Link to upload answer sheet	<a href="https://forms.gle/6B1n5G5uXBmXgkX9">https://forms.gle/6B1n5G5uXBmXgkX9</a>

**Instructions to Candidates:** No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.

\*Section A consists of Two questions carrying 10 marks each (Long Answer); attempt any **ONE**.

\*\*Section B consists of Seven questions carrying 5 marks each (Short Answer); attempt any **FIVE**.

**Section A****(1 X 10 = 10)**

1.	Explain anatomy and physiology of human heart with neat, clean and labelled diagram.
2.	Describe nitrogen cycle and biological nitrogen fixation.

**Section B****(5 X 5 = 25)**

3.	Describe structure of nephron.
4.	Enlist salient features of kingdom Monera.
5.	Differentiate T.S. of dicot root and monocot root.
6.	Write down the functions of cerebrum.
7.	Discuss mitosis cell division.
8.	Write various factors affecting photosynthesis.
9.	Briefly describe plant growth hormones.

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**Note:** Disclosure of identity by writing mobile number or making request for passing on any page of answer-sheet will lead to UMC against the candidate.

(Morning)  
111223

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**Section A**

(1 X 10 = 10)

1.	Draw a well- labelled diagram of the human alimentary canal and describe its different parts.
2.	What do you understand by Plant respiration? Explain Glycolysis.

**Section B**

(5 X 5 = 25)

3.	Differentiate between monocot stem and dicot stem.
4.	What is the menstrual cycle? Name the Hormones which control the menstrual cycle.
5.	Why Nitrogen is called a limiting nutrient? Explain the Nitrogen cycle.
6.	What is a cell? Discuss its various organelles and their functions with a neat and clean diagram.
7.	Write a short note on the five kingdom classification.
8.	Define double circulation and draw a well- labelled diagram of the human heart.
9.	Explain various factors affecting photosynthesis in plants.

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(Morning)  
19 12 25

Roll Number ----- (Total Number of Questions 09) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	1 <sup>st</sup>
Subject	Remedial Biology
Subject Code	BP106RBT
Paper ID	94649
Time	1.5 Hours
Maximum Marks	35

**Instructions to Candidates:** No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.

\*Section A consists of Two questions carrying 10 marks each (Long Answer); attempt any **ONE**.

\*\* Section B consists of Seven questions carrying 5 marks each (Short Answer); attempt any **FIVE**.

**Section- A**

(1 X 10 = 10)

1.	Briefly describe the mechanism of urine formation in the human kidney.
2.	Draw a labelled diagram of the human alimentary canal and explain its major parts.

**Section B**

(5 X 5 = 25)

3.	What is a cell? Describe its major organelles and their functions with a neat labelled diagram.
4.	Differentiate between monocot stem and dicot stem.
5.	What is the menstrual cycle? Name the hormones that regulate it.
6.	Explain the functions of the cerebrum.
7.	What happens if blood fails to coagulate?
8.	Why does the colour of a leaf change in the dark? Which pigment is more stable?
9.	State the importance of plant growth and development.

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18 12 24

Roll Number ----- (Total Number of Questions 09) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	1 <sup>st</sup>
Subject	Remedial Biology
Subject Code	BP106RBT
Paper ID	94635
Time	1.5 Hour
Maximum Marks	35

**Instructions to Candidates:** No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.

\*Section A consists of Two questions carrying 10 marks each (Long Answer); attempt any **ONE**.

\*\* Section B consists of Seven questions carrying 5 marks each (Short Answer); attempt any **FIVE**.

**Section- A (1 X 10 = 10)**

1.	A) What is glycolysis? Explain its role in plant respiration. (2+3) B) Define plant growth and explain various factors affecting growth. (5)
2.	A) Draw a well labelled diagram of human digestive system and Write about function of each and every part of it. (3 + 3) B) Write a short note on urine formation. (4)

**Section- B (5 X 5 = 25)**

3.	Write a short note on five kingdom classification.
4.	Explain Nitrogen cycle in detail.
5.	Discuss any two endocrine glands with their functions.
6.	Illustrate the process of photosynthesis.
7.	Define Inflorescence and write about various parts of a flower with help of a diagram.
8.	Discuss various modes of excretion.
9.	Write a short note on cell, its organelles and their function.

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08 12 23  
(Evening)

Roll Number \_\_\_\_\_ (Total Number of Questions 06)

(Total number of Printed Pages 01)

Programme	M. Pharmacy (Pharmaceutics, Pharmaceutical Chemistry, Pharmacology)
Semester	3 <sup>rd</sup>
Subject	Research Methodology & Biostatistics
Subject Code	MRM301T
Paper ID	75320
Time	3Hours
Maximum Marks	75

*Instructions to Candidates: No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely. Attempt any five questions out of six questions. Each question carries fifteen marks.*

- Describe various non- parametric tests. Write a note on null hypothesis and Student's t test with one example. (7+4+4)
- Write details of record keeping and SOPs for animal house facility as per CCSEA. Explain the terms 'Quarantine' and 'Surveillance' concerning the laboratory animal facility. (7<sup>1/2</sup>+7<sup>1/2</sup>)
- Describe the benefits of online business practices in medical field. Discuss 'truth telling' as a part of medical ethics. (10+5)
- Enlist various objectives of the research. Explain various study designs with examples. (5+10)
- What is Helsinki Declaration? Elaborate on the various principles for medical research as per Helsinki declaration. (5+10)
- A. The table given below shows the data obtained during outbreak of a viral disease:

	Attacked	Not attacked	Total
Vaccinated	31	469	500
Not vaccinated	185	1315	1500
Total	216	1784	2000

Test the effectiveness of vaccination in preventing the attack from a viral disease. Test your result with the help of 'Chi square' test at a 5% level of significance. (7<sup>1/2</sup>)

B. The following table illustrates the sample psychological health rating of corporate executives in the field of Pharmacy, Biotechnology and CROs:

Pharmacy	41	53	54	55	43
Biotechnology	45	51	48	43	39
CROs	34	44	46	45	51

Can we consider the psychological health of corporate executives in the given three fields to be equal at 5% level of significance? (7<sup>1/2</sup>)

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