



GRETSA UNIVERSITY - THIKA

UNIVERSITY EXAMINATIONS JANUARY - APRIL 2017 SEMESTER

BRIDGING COURSE IN BIOLOGY

COURSE CODE: GUBC 012

COURSE TITLE: BRIDGING COURSE IN BIOLOGY

DATE: 3 APRIL 2017

TIME: 11.30 AM - 1.30 PM

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

SECTION A

[ANSWER ALL QUESTIONS IN THIS SECTION]

MULTIPLE CHOICE QUESTIONS [1-5] [ONE MARK EACH]

1. The _____ destroys worn out and dead cells.
 - A. Nucleolus
 - B. Endoplasmic reticulum
 - C. Nucleus
 - D. Centrosome

2. Which feature is not a characteristic of the cell membrane?
 - A. It is made up of a phospholipid monolayer.
 - B. It can seal tiny breaks in itself.
 - C. It is selectively permeable and can regulate passage of material through it.
 - D. Many kinds of proteins are embedded in the membrane.

3. Which of the following is a not a function of kidney?
 - A. Regulatory
 - B. Excretory
 - C. Endocrine
 - D. Respiratory

4. Which of the following is a characteristic of muscle cells?
 - A. Elasticity
 - B. Excitability
 - C. Ratability
 - D. All of the above

5. Which kind of skeleton is found in insects?
 - A. Endoskeleton
 - B. Superskeleton.
 - C. Exoskeleton
 - D. Hydroskeleton

6. State 5 factors affecting glomerular filtration 5mks

7. Outline any 4 advantages of asexual reproduction in plants 4mks

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| 8. State 6 functions of skeletal system | 6mks |
| 9. Highlight six factors affecting photosynthesis | 6mks |
| 10. State 6 modes of reproduction in plants | 6mks |
| 11. Outline 5 reasons for movement in plants | 5mks |
| 12. State 3 significance of homeostasis in animals | 3mks |

SECTION B

[CHOOSE ANY THREE QUESTIONS]

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| 1. a) Discuss any 6 characteristics of living organisms | 12mks |
| b) Discuss any 4 body systems | 8mks |
| 2. a) Draw a well labeled diagram of human cell | 8mks |
| b) Discuss the functions of any 6 cell organelles | 12mks |
| 3. a) Discuss any 4 differences between light dependent and light independent stages of photosynthesis | 8mks |
| b) Explain any 6 roles of energy to living organism | 12mks |
| 4. a) Using a well labeled diagram, explain the structure of the nephron | 8mks |
| b) Discuss any 6 significance of excretion and osmoregulation | 12mks |
| 5. a) Discuss any 5 adaptive characteristics of insect pollinated plant | 10mks |
| b) Discuss the process of fertilization in flowering plants | 10mks |