

SECTION B

Answer any two questions. You are advised to spend one hour in this section.

Your answers should be illustrated by large, clearly labelled diagrams, where appropriate.

Your answers must be in continuous prose, where appropriate.

Your answers must be set out in sections (a), (b) etc. as indicated in the question.

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| 9 | (a) | Describe the structure of RNA. | [8] |
| | (b) | Outline how DNA replicates semi-conservatively. | [8] |
| 10 | (a) | Describe the roles of ATP in living organisms. | [8] |
| | (b) | Discuss any three factors that limit the rate of photosynthesis. | [8] |
| 11 | (a) | Describe the process of ultrafiltration. | [8] |
| | (b) | Explain the transmission of an action potential along a myelinated neurone. | [8] |
| 12 | (a) | Outline the roles of hormones secreted by the placenta during pregnancy. | [8] |
| | (b) | Discuss ethical implications surrounding <i>in vitro</i> -fertilisation. | [8] |