

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

SECOND YEAR [2015-18]

B.A./B.Sc. THIRD SEMESTER (July – December) 2016

Mid-Semester Examination, September 2016

Date : 17/09/2016

Time : 12 noon – 1 pm

ZOOLOGY (General)

Paper : III

Full Marks : 25

[Use a separate answer book for each group]

Group – A

1. Define humus. Distinguish between NPP & GPP. Why is the *Universal Model of Energy Flow* considered as the best model? Cite an example of a *predator food chain*. Mention one major drawback of pyramid of biomass. Describe long-day plants with an example. Who are poikilotherms? [1+2+2+1+1+2+1]

Or,

Define leghaemoglobin. What is ammonification? Name an anaerobic bacterium which plays the key role in denitrification. Enumerate the competitive exclusion principle (Gause's principle) & mention its significance. What is Amensalism? Define allelopathy with an example. [1+2+1+(2+1)+1+2]

2. What are source & sink populations? Distinguish between crude natality rate & specific natality rate with suitable examples. Mention the importance of a survivorship curve. [2+2+1]

Or,

Illustrate the differences between r-selected & k-selected species. [5]

Group – B

3. What is Sinusoid? What is TGB? Give the chemical structure of juvenile hormone? Describe briefly how T3 hormone is formed? [1+1+1+2]

Or,

What is fibrinolysis? Briefly explain it with a suitable flowchart diagram. Write the E.C number of **nucleoside-phosphate kinase** with proper reaction. [1+2+2]

4. State the function of different neuro hormones in insect. [5]

Or,

Write the extrinsic, common, intrinsic pathways of coagulatory haemostasis [5]

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