

1/MDC-115 Syllabus-2023

2 0 2 4

(December)

FYUP : 1st Semester Examination

MULTIDISCIPLINARY COURSE

(Introductory Life Science)

MDC-115

Marks : 56

Time : 2½ hours

*The figures in the margin indicate full marks
for the questions*

Answer Question No. 1 and any four from the rest

1. Answer any four of the following questions :

3×4=12

(a) Name the five kingdoms of Whittaker's system of classification, giving suitable examples.

2+1=3

(b) Who introduced the system of binomial nomenclature? What are the two parts of a scientific name in binomial nomenclature, and how should they be written? Give one example.

½+2+½=3

(2)

- (c) Differentiate between prokaryotic and eukaryotic cells. List two examples each of prokaryotic and eukaryotic organisms. $2+1=3$
- (d) Define a gene and explain its basic structure. $1+2=3$
- (e) What are bio-resources? Differentiate between renewable and non-renewable bio-resources with examples. $1+2=3$
- (f) Define wildlife. Mention the causes of loss of wildlife. $1+2=3$
2. (a) What are the general features of the kingdom plantae and animalia? $4+4=8$
- (b) What is the 'primordial soup' hypothesis and who proposed it? $2+1=3$
3. (a) Define lipids. Write about the different types of lipids found in the body and discuss their functions, providing examples for each type. $1+3+2+1=7$
- (b) Discuss the various biological functions of proteins. 4

(3)

4. (a) Name and describe the economic importance of two animal bio-resources. $2\frac{1}{2}+2\frac{1}{2}=5$

Or

Name and describe the economic importance of two plant bio-resources. $2\frac{1}{2}+2\frac{1}{2}=5$

- (b) What is evolution? Why was *Archaeopteryx* considered as a connecting link between reptiles and birds? $1+5=6$
5. (a) What is biodiversity? What are the three levels of biodiversity? Discuss the importance of biodiversity. $1+1+4=6$
- (b) Briefly describe the structure and function of an ecosystem. What is a food chain and a food web? $3+2=5$
6. (a) Explain *in situ* and *ex situ* conservation of wildlife giving examples. $3\frac{1}{2}+3\frac{1}{2}=7$
- (b) Write the names and purpose of some International Agencies related with conservation of wildlife. 4

(4)

7. Write on any *two* of the following : $5\frac{1}{2} \times 2 = 11$

- (a) Nucleic acids
- (b) Biological hot spots of India
- (c) Ecological pyramids
- (d) Natural selection
