



Post Graduate Dept. of Zoology

S.K.M. University
Dumka - 814101, India

Ref. No. P. G. Z. 20/19

Date 09.05.2019

To

The DSW
S.K.M. University, Dumka

Sub: Submission of modified syllabus of PG Zoology SEM-IV (CBCS)

Sir,

Please find enclosed herewith a copy of modified syllabus of M.Sc. SEM-IV (Zoology) as per the uniform guideline applicable to all subjects of science at post graduate level. The previous syllabus had one core and one elective theory papers with one practical paper in each respectively. However the departmental council keeping it at par with other subjects of science has modified the syllabus with two elective/special papers, one practical paper and one dissertation, each having 100 marks.

This is for your information and necessary action.

Encl:

As above

Yours faithfully

(HOD)

4th Semester

Elective paper	Paper-XIII	4 Credits	64 Hours
Elective paper	Paper-XIV	4 Credits	64 Hours
Practical	Paper-XV	4 Credits	64 Hours
Desertation	Paper-XVI	4 Credits	64 Hours

4 th Semester	
Environmental Biology:	Marks
Theory Paper XIII	(70+30) =100
Theory Paper XIV	(70+30) =100
Practical Paper XV	(70+30) =100
Dissertation-XVI	100

4th Semester detailed curriculum

Theory Paper XIII

Environmental Biology

1. Concept of productivity-primary and secondary productivity.
2. Plankton community structure and species diversity.
3. Environmental pollution (Air, Water, Noise) and remedial strategies.
4. Ozone layer and its depletion -Possible effects on plants, animals and man.
5. Predation- Models of prey predatory dynamics .Role of predation in nature.
Parasitism.
6. Lakes-origin and classification of lakes.
7. Sustainable development
8. Biogeochemical cycle
9. Energy Flow
10. Pesticides and their effects

Theory paper XIV

Environmental Biology

1. Biosphere and major ecosystems of the world.
2. Reservoir limnology and its thermal stratification, stratification and dynamics of oxygen, nitrogen, phosphorus and inorganic carbon.
3. Environmental factors and global environment.
4. Limnology-Origin and classification of lakes, vertical stratification, eutrophication.
5. Natural disasters and management.
6. Climatic change and its impact on plants, animals and human beings.
7. Biodiversity and its threats, conservation.
8. Environmental laws for protection of wild life, natural habitats and environment
9. International Conferences on environment
10. Waste Management

Practical ~~W~~- Environmental Biology

List of experiments

(I). Analysis of water

Physicochemical-Temperature, Turbidity, Light penetration, Conductivity, Total suspended solids, Total dissolved solids, pH, Total alkalinity, Carbonates and bicarbonates, Free CO₂, Dissolved O₂, BOD, COD, Nitrate, Chloride, Silicate, Phosphate.

Biological-

Phytoplankton analysis, Biomass estimation, Zooplankton analysis, benthic macro invertebrates

(II). Analysis of soil

Physico chemical-

Sampling, texture, pH, Conductivity, Total alkalinity, Carbonates and bicarbonates, Acidity

Biological

(III).Community analysis of Grass land,

(IV).Study of bio indicators of pollution

(V)Primary productivity-biomass method, light and dark method,

(VI) Tools and techniques of- Flame emission spectrometry, Absorption spectrophotometry, Atomic absorption spectrophotometry, Gas chromatography

Model of questions
1.Physico chemical Analysis of water -
2.Biological Analysis of water -
3.Physicochemical Analysis of soil-
4.Experiments on one of the following (Community analysis/ Study of bioindicators/ Primary productivity)
5.Spotting-(One)-
6.Viva-
7. Record -

VI Dissertation: 100 marks

Project-50 marks

Presentation (PPT)- 30marks

Viva-20 marks