

C.R.S.U./M.D.U./K.U.K.

B.Ed.



CONTENTS

UNIT-I

1. Natu	re, History, Scope and Interdisciplinary LInkage iological Sciences3
A.	Describe the nature and history of Biological Science
2.	Describe the scope and interdisplinary linkage of Biological sciences
3.	Discuss aims and objectives of Biological Science education at the secondary level. Or
	Explain the general aims of teaching Biological Sciences. Also justify the inclusion of this subject in secondary school curriculum
4.	Bring out the difference between the terms and objectives. Explain the general aims of science at school
and the	level. Or
	What are the general aims of teaching Biological sciences in our schools? Also differentiate between the terms aims and objectives? Or
	Explain in detail the general aims and objectives of teaching Biological-science
5.	What do you mean by the term specification of the objectives? Provide a scheme of specification for the objectives of teaching Biological Sciences at the school stage.
	Or
	What is the relationship of instructional objectives with General Aims and Objectives of Teaching Life Sciences?
	Or
	State the different general objectives of teaching Biological Sciences at the school stage
6.	Describe the facts and principles of Biology and its applications consistent with the stages of cognitive
	development. Or

	Describe Plaget's Cognitive Development Theory. Or
7.	Describe characteristics, drawbacks and educational implications of Piaget's Theory of Cognitive Development
	25
8.	What do you know about origin of life and evolution? Describe the facts and principles related to origin of life and evolution. 29 What is biodiversity? What are biodiversity facts and principles. Describe the importance of biodiversity. 36
10.	What do you know about observation and experiments
	in Biological sciences? What are the facts and
3	principles of observations and experiments in
	Biological sciences?40
11.	What do you understand by Bloom's taxonomy of educational objectives? Give an account of the
	objectives in knowledge sub-domain with examples. Or
	Describe Bloom's Taxonomy of Educational Objectives.
	Or
	What is Bloom's taxonomy of instructional objectives?
	Name some of the popular taxonomies.
	Or
3 10 4	Describe the classification of Bloom's Taxonomy of Educational objectives with suitable examples 44
10	Explain the term "Writing Objectives in Behavioural
12.	Terms". What is its need? Name a few important
	methods or approaches of such writing.
* / _	Or
	Mager's and Miller's both approaches suffer from serious drawbacks and limitations. Point out these limitations and discuss how far RCEM approach had tried to get rid of these drawbacks?
	Or writing
	What is the Miller's approach with regard to the writing of objectives? Illustrate it with an example
132	Short-Answer Type Questions ⁵⁷
	Short-Anawer Type Questions
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UNIT-II

a Pod	agogical Analysis67
2. Ped	Describe the meaning, importance and steps of Pedagogical analysis. Or
	What do you mean by pedagogical analysis of a content material in the subject Biolosical Science? Explain by laying emphasis on the need of such analysis. Or
	Explain the concept and procedure of Pedagogical analysis of a unit in detail by quoting examples. Or
gen et i	Explain clearly what do you mean by the term pedagogy or science of teaching?
2.	Discuss the role played by pedagogy in a teacher's teaching. Or
	Discuss the concept of pedagogical analysis of a unit. How pedagogical analysis of a unit can be useful to a science teacher? Or
-/	Discuss the concept of pedagogical analysis of unit. How pedagogical analysis of a unit can be useful to a teacher? Discuss the procedure of pedagogical
3.	What is Photosynthesis? What actually goes inside the process of photosynthesis? Explain in detail 72
4.	Perform pedagogical analysis of subject content on photosynthesis for class X
5.	Discuss in brief the role of various organs of our digestive system in digesting the foods and liquids.75 Discuss in brief our respiratory system for carrying
6.	out the process of respiration
8.	Digestive System
9.	through proper illustrations and examples

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	What do you understand by pedagogical and
	What do you understand by pedagogical analysis of the content? Give a brief account of the activities and experiments for both class students on the following
	owneriments for both class students
	10110Win
10.	What is Foological Polance?
11.	How is the Ecological Balance maintained
	Develop a content-cum-pedagogical analysis 86
12.	Ecological balance
13.	Ecological balance
	Discuss in detail.
N. W.	Or
12/27	"Development is the matter of both heredity and
	environment." Explain this statement and illustrate
roin.	the relative importance of heredity and environment
	in growth and development
	Or
	Discuss the importance of heredity and environment
	in the development of personality.
	Or
	Heredity and environment are complementary to each
	other. Justify92
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	UNIT-III
3. Dev	elopment of Instructional Material109
1.	Under what major section has the content been
	divided in the sciences books for achaela managed by
	109
2.	Comment upon Unit Planning. 111
1	Or
	What is unit planning? Discuss how can it be properly
	the subject life sciences.
	Or
	Discuss with an example the procedure of unit planning in the subject life scient
3.	
•	
	lesson for teaching life sciences? Answer in the light of the famous Herbertian steps for the lesson planning?
	steps for the lesson planning

		What is lesson planning? How can this task be carried out by a teacher of life sciences?
	4.	What is meant by the term teaching aids? What types
		of different teaching aids may be used in teaching of
		life sciences? Discuss the preparation of any type of
		teaching aid used by you in your training programme. Or
	Language Contraction of the Cont	Discuss the importance of using teaching aids in
	_	teaching life sciences 128
	5.	What are graphic aids? Discuss the preparation of
-		charts, pictures and diagrams in the teaching of life sciences
	6.	Discuss the preparation of different types of models
		through a variety of materials like clay, plaster of
		paris, cardboard, thermocole, paper-machie etc. for
	7.	the teaching of life sciences
	•	Give a detailed account of the preparation of acquarium for teaching Life Science concepts at the secondary
		level.
		Or
	•	Describe the development of an acquarium. Or
		Explain how an acquarium is devised. Or
		Justify the need of developing acquarium, vivarium
		and terrarium in the school campus for the teaching of life sciences.
		Or
		How will you establish a good acquarium, vivarium and
		terrarium for your school science museum? Discuss the
	0	educational advantages drawn through them 136
	8.	Describe the development of demonstration experiments.
		Or
		Explain how a demonstration experiment is organised.
		Or
	, = -	How would you as a teacher of life sciences proceed
		for the development of demonstration experiments
	. 1	for the teaching of your subject? Discuss in detail. Or
		Justify the need of performing demonstration
		experiments in the subject life sciences by the teacher
y 19	The state of the s	in the classroom
T. S. Carlotte	9.	Describe the development of self-instructional material.
		(Linear programming)
		Or
	-	

	Describe in brief the various phases of developing programmed instructional material in the teach.
and in	programmed instructional material in the teaching of life sciences.
	life sciences.
Sec. A. Sec.	Or
19.40	Discuss in detail the various activities undertaken by
	a programmer while preparing his programme for the
S. C. C. L. Ste.	instructional material related to the teaching of life
,	sciences.
f: 1.	Or
	Discuss the procedure of writing a programme or
	preparing an instructional material through linear
and the same of th	DIVERANTINE IN THE SCIENCES
10.	What is linear programming? Throw light on its
	characteristics.
	Or
	What is linear programming? Why is it termed as
*** *** *** *** *** *** *** *** *** **	linear or extrinsic? Discuss its procedure.
. 51	Or
	Explain linear programming in detail
11.	What do you mean by Programmed Learning? Fundation
	it.
	Or
	Write an essay on Programmed Learning in Indian
	Context.
Trape a market	Erral air vita
	Explain with examples the Principles of Programmed Learning.
	What are the Direction
Hilly downer	What are the Principles of Programmed Learning?
	Explain with examples the different styles of programming.
And a second	
48 at	Write a short note on D
	Write a short note on Principles of Programmed
	0-
	What is Programmed I
10	underlying Programmed Learning? What are the Principles What are the different styles of Programmed Learning?
12.	What are the different styles of Programming? Explain. Or
* * * * * * * * * * * * * * * * * * * *	of Frogramming? Explain.
1 4	What do you mass I. D
(' ·	the chief characteristics of Linear Programming. Or
	Explain - Or
	Explain programmed learning. Illustrate with example "Branching" as one of the styles of
	"Branching" as one of the styles of programming. Or Explain to a style of programming.
	Explain diff.
	Explain different characteristics of a linear programming. Discuss its advantages and limitation.
	Discuss its advantages and limitations
	The stations of the state of th

13.	What is the difference between programmed instruction and traditional teaching methods? Write in detail various steps for preparing a programme. What are its advantages and limitations of programmed learning? Or
	Write a short note on Branching System of Programming.
	Or What do you man by Programmed I again at Free lair
	What do you mean by Programmed Learning? Explain at length the process of preparation of programmed learning material. Or
	How will you prepare programmed learning material? Discuss in detail.
	Or Describe in briefths store involved in the description of the store involved in the store in
	Describe in brief the steps involved in the development of programmed instruction
14.	Explain problem solving method of teaching in life science at school level. Discuss its merits and demerits. Or
	Discuss problem solving method in the light of Indian conditions for secondary level classes. Or
	Explain problem solving method of teaching life science with the help of an example. Or
	What are the steps in problem solving method? Discuss
1.5	them by using an example
15.	What do you mean by Investigatory approach? Describe the merits and demerits of Investigatory
-	approach
16.	What is Collaborative Learning? Discuss the basic
	assumptions and features of collaborative learning.
	What is collaborative learning? Discuss the merits and advantages of collaborative learning. Or
17.	Write a note on collaborative learning
18.	"Micro-Teaching is the real teaching". In the light of this statement discuss the importance and advantages of Micro-Teaching.

(* f)	What is Micro-Teaching? Write in detail Indian Model of Micro-Teaching.
ople of York	of Micro-Teaching.
	What is Micro-Teaching? Discuss its merits limitations for teachers' training programme
esi Aji wa	0
	Write short note on Micro-Teaching concept and its
	significance
19.	Discuss the general process involved in micro-teaching by mentioning different steps and activities
	by mentioning different steps and activities.
	On The state of th
· juni	What is micro-teaching cycle and what are the
	differences between micro-teaching and traditional teaching?
	teaching?
20.	What is the importance of Micro-Teaching? Prepare
	an Indian Model of Micro-Teaching? Prepare What do you mean by Skill of Introduced in Micro-Teaching?
21.	What do you mean by Skill of Introducing the Lesson? Describe the component behavious of the Lesson?
	Describe the component behaviours and observation schedule of this skill
0.5	schedule of this skill. What do you mean by skill of a
22 .	
	T DOLLAYIUUIS AND ONGOWERST.
00	of this skill
0.	11140 UU VOII MAAN hir Cl-111 C 111
	the component behaviours and observation schedule of this skill.
24 .	What do you understall 187
44.	
	Illustrate the process of developing various components of the skill through a micro-lesson
25.	of the skill through a micro-lesson
	What do you understand by the Skill of Stimulus Variation? Illustrate the process of dead
	Variation? Illustrate the process of developing various components of this skill through a minute.
	components of this skill through a micro lesson.
	What do you
	What do you mean by Skill of Stimulus Variation? Schedule of the component behaviours and the schedule of the component behaviours.
	Describe the component behaviours and observation Discuss the last last last last last last last last
26.	schedule of this skill
	Discuss the different components of the following (a) Question:
	M. M. G. S. I.
	(c) Introduction (b) Explaining
	(a) Stimulus VI-11-11-11
	- Souss mione 4
	and introduction with skills of questioning avalanction
13° S	and introduction with examples
	Short-Answer Type Question-
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UNIT-IV

4. C	Concept of Measurement and Evaluation 223
	Explain the concept of Measurement. How is it different from Evaluation? Explain it with examples. Or
	What do you mean by measurement and evaluation? Or
	Define and discuss the terms measurement and
5 50	evaluation by clearly distinguishing them from each
	other.
	every with a complete of
	Discuss in detail the concepts of test, measurement
5.8600	and evaluation.
	What is evaluation? How does it differ from
1 53	measurement? Discuss
2	
	Or
57 13	Explain the Formative Evaluation in detail.
	Or
- tr	Discuss in brief Formative Evaluation. Or
111	What is Formative Evaluation ? State the
	characteristics, principles and uses of Formative
	Evaluation.
	Or
	Write a note on Formative Evaluation 226
. 3	3. Give an account of Summative Evaluation.
	Or
	Discuss in brief Summative Evaluation. Or
	What is Summative Evaluation? State the
	characteristics. Mention the steps for test construction
100	in Summative Evaluation. What are the uses of
	Summative Evaluation?
	Or
	Write a note on Summative Evaluation 228
	Differentiate between Formative and Summative
	evaluation. Is there need to study such type of content
	to students in Physical Sciences

		Or
	, *	Differentiate between 'Formative' and 'Summative'
		Evaluation 230
	_	Discuss in brief Diagnostic Evaluation.
	5.	Or
		Write a note on Diagnostic Evaluation.
		On
		What is diagnostic test? How diagnostic evaluation can
		be done? Explain231
	6.	Discuss the concept of diagnostic testing and remedial
	17	instruction. Describe the steps of preparing a
		diagnostic test 234
	7.	How diagnostic test is different from achievement
		test? What remedial teaching you will suggest for
		students who is efficient in Biological Science? 236
	8.	What are achievement tests? What steps are to
41.00		be followed for the construction of a teacher made
		achievement test in life sciences? Discuss.
		Or
	· .	Explain the procedure of construction of an objective
		type achievement test
	9.	How will you prepare an achievement test in life
	U.	•
		sciences comprising objective type items. Illustrate with an example
	10.	_
1	10.	Explain the attributes of a good test.
	٠.	Or
		Describe the attributes of a good achievement test.
		Or
		Discuss the attributes of a good or an ideal achievement
		test in life sciences.
		Or
		What are achievement tests? Name and outline their
		different types
	11.	barries as important part to assess the personality of
		children. How is it needful in different ways? Explain
		the nature and scope.
.0		Or
		Explain how grading is done in educational evaluation.
		- Or
27	1	Explain the different types of grading 244
λć		The of Brading.

	Differentiate between evaluation, comprehensive and continuous evaluation. Which is the best?	d
	Or	
	'Evaluation is comprehensive and continuous". Discus	S
t	the statement in view of the inter-relationship between	n
	objective, learning experience and evaluation 24'	
	What is the need and importance of comprehensive	
8	and continuous evaluation? Name various objective	Э
	ype tests by giving one exam ple of each.	
	Or	
	Discuss in detail evaluation as a continuous and omprehensive process.	I
	Or	
	Vrite the merits and demerits of comprehensive and	
C	ontinuous evaluation	3
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