

GOVT. OF KERALA
DEPARTMENT OF TECHNICAL EDUCATION
OFFICE OF THE CONTROLLER OF TECHNICAL EXAMINATIONS
THIRUVANANTHAPURAM

DIPLOMA EXAMINATION IN ENGINEERING /TECHNOLOGY/MANAGEMENT

CORRECTION NOTE

Revision & Sub code: (15) 3001
Subject: Environmental Science and Disaster Management
Verified by:

In scheme of evaluation Qn. no. VII (b). Figure are not attached.
So figures are attached and rectified the scheme.

13 1

SHEME OF VALUATION
(Scoring Indicators)

Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
I (1)	Deforestation is the removal of a forest and where the land is thereafter converted to a non-forest use.	2	2	
(2)	Ecosystem is a community made up of living organisms and nonliving components such as air, water, and mineral soil.	2	2	
(3)	Solid waste is a waste type consisting of everyday solid and semi solid items that are discarded by the public.	2	2	2x5 =10
(4)	Disaster is a sudden accident or a natural catastrophe that causes great damage or loss of life.	2	2	
(5)	Trem card is Transport Emergency card which is a document used when transporting dangerous goods Trem card contains important safety information about the vehicles load.	2	2	

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SHEME OF VALUATION
(Scoring Indicators)

Revision : 15 Course Code : 3001

Course Title : ESDM.

Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
II (1)	a) Timber extraction b) Fodder to cattles c) Climatic amelioration d) Moisture conservation e) Control pollution f) Tourism. g) Conserve wild life	any 6 1x6 = 6	6	5x6 = 30
II (2)	a) Consist of rich nutrient and organic matter b) Exist where rainfall is low and uneven. c) Provides largest biomass d) Exist in moderate climate e) Consist of seasonal flowering plants f) Scattered trees or savannas are present	any 6 1x6 = 6	6	
II (3)	a) Effects on human health <ul style="list-style-type: none"> - cause stress. - B.P rise - cardiovascular diseases - immune depression fetus development b) Psychological Effects <ul style="list-style-type: none"> - affect social interaction - anxiety - aggression - uncontrollable- annoyance. 			

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SHEME OF VALUATION
(Scoring Indicators)

Revision :	15	Course Code :	3001	
Course Title : ESDM				
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
II (4)	a) Heavy rainfall b) Long periods of rain c) snow melt d) Deforestation e) steep slopes f) Improper land use	any 6 1x6 =6	6	
II (5)	a) Air pollution b) Water pollution c) Soil pollution d) Kill bees and decline pollinators e) Eliminate animal's food resource f) Cause eggshell thinning and affect birds	any 6 1x6	6	
II (6)	Bio magnification is the increasing concentration of a substance & toxic chemicals, in the tissue of tolerant organisms at successively higher level in food chain. This is because of persistence, food chain energetics, low rate of internal degradation Eg: Over use of DDT	3 2 1	6	

(4)

SHEME OF VALUATION
(Scoring Indicators)

Revision :		Course Code :		
Course Title :				
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
II (7)	a) Introduce sewage treatment plants b) Cleaning oil from surface water c) Use of chemical dispersant d) Cande oil washing e) Use high pressure jet of water.	avg 4	6	
III (a)	a) Social cost of big dam is widespread displacement of local people b) Narmada project displaced 1.5 million along with 600000 acres of land c) Hirakud dam displaced about 20000 people over 250 villages d) In India over past 50 yrs. people affected directly or indirectly by dams are 20 million.	avg 4 25 x 4	8	

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SHEME OF VALUATION
(Scoring Indicators)

Revision : 15 Course Code : 3001

Course Title : ESDM

Qst. No	Scoring Indicator	Split up Score	Sub Total	Total			
III (b)	a) Lower environmental impacts.	1x7	7	15			
	b) They will not run out						
	c) Unlimited supply						
	d) Provides energy security						
	e) Fits into sustainable development						
	f) Reliable and devices are modular						
	g) Decentralised production						
	IV (a)	a) Conserve water			4	8	8
		b) Conserve energy					
c) Protect the soil							
d) Promote sustainable agriculture							
e) Rain water harvesting		4					
f) Turn off appliances when not in use							
g) don't uproot trees							
h) use organic fertilizer							

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SHEME OF VALUATION
(Scoring Indicators)

Revision :		Course Code :		
Course Title :		M123		
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
IV (b)	a) Removal of vegetation b) Destruction of landscape c) Large scale of deforestation d) Mining of radioactive elements in Kerala causes destruction of seashore e) eg: Deforestation in Mussoorie & Dehradun f) eg: Goa forest land g) Black forest in Germany	(x4 points)	7	8+7=15
IV (a)	a) To maintain essential ecological processes and life supporting systems b) To preserve diversity of species c) To make sustainable utilisation of species and ecosystems d) For the good health of the future generation e) To give maximum benefits to present generation f) For the sustainable utilisation of resources	Any 6	8	8+7=15

SHEME OF VALUATION
(Scoring Indicators)

Revision : 15 Course Code : 3001

Course Title : ESDM

Qst. No	Scoring Indicator	Split up Score	Sub Total	Total								
V (b)	<p>a) Abiotic Components :- High temperature, low rainfall dry climate</p> <p>b) Biotic components</p> <p>Producers - shrubs, bushes, grasses, Consumers - insect, reptiles, camels. Decomposers: Fungi, bacteria</p> <p>Note: Explain functions</p>	4 3	7									
VI (a)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Producers</th> <th>Primo. Consumer</th> <th>Sec. Consm</th> <th>Tertiary Consm</th> </tr> </thead> <tbody> <tr> <td>Green</td> <td>→ Green hopper</td> <td>→ Toad</td> <td>→ Snake</td> </tr> </tbody> </table> <p>The pattern of eating and being eaten forms a linear chain called food chain which can be always tracked back to producers</p>	Producers	Primo. Consumer	Sec. Consm	Tertiary Consm	Green	→ Green hopper	→ Toad	→ Snake	4	8	807 45
Producers	Primo. Consumer	Sec. Consm	Tertiary Consm									
Green	→ Green hopper	→ Toad	→ Snake									

SHEME OF VALUATION
(Scoring Indicators)

Revision : 15		Course Code : 3001		
Course Title : ESPM				
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
<u>VI</u> (b)	a) Impact on atmosphere and climate <ul style="list-style-type: none"> • Heat island + changes in air quantity • changes in patterns of precipitation b) Impact on lithosphere & land resources c) Impact on hydrosphere & water resources d) Impact on biosphere	2x4 1x4 7	7	
<u>VII</u> (a)	a) Effect on water bodies b) Effect on aquatic organisms c) Effect on human health ex: Dissolved oxygen Biological oxygen demand Eutrophication Contamination by pathogens	4 4	8	

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SHEME OF VALUATION
(Scoring Indicators)

Revision :	15	Course Code :	3001	
Course Title :	ESDM			
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
<u>VII</u> (b)	Methods, 1) Gravity settling chamber 2) Cyclone separator 3) Electrostatic precipitator 4) Wet scrubber. 5) Fabric Filters	Exp 4 Fig 3	7	8+7 15
<u>VIII</u> (a)	Causes are: a) Industries b) Urban runoff c) Domestic sewage. d) Coal fired power plants e) Nuclear power plant f) effluents from. textile, paper, industry	4 4	8	

(10)

SHEME OF VALUATION
(Scoring Indicators)

Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
VIII (b)	a) Exposure of nervous system to radiation causes death within hours b) Cells in the eye die due to radiation c) Acute radiation causes vomiting d) Mouth ulcers e) Infection in intestine f) Unborn babies are vulnerable to brain damage	2x6 7	7	
IX (a)	Emergency phase include the following a) Training for search & rescue b) Immediate relief operations c) Search & rescue d) Assessment survey. Explain each —	2x4 8	8	

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SHEME OF VALUATION
(Scoring Indicators)

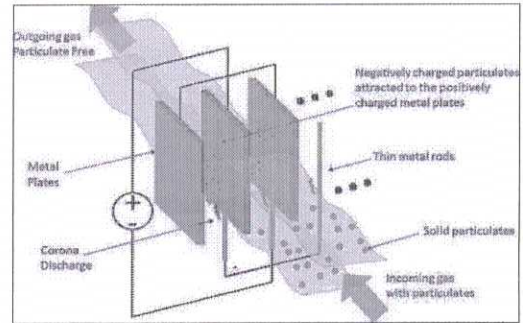
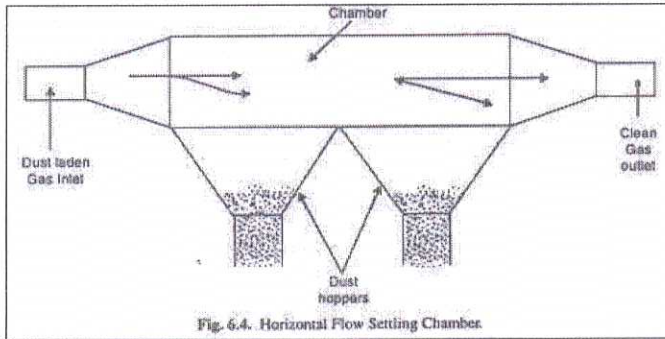
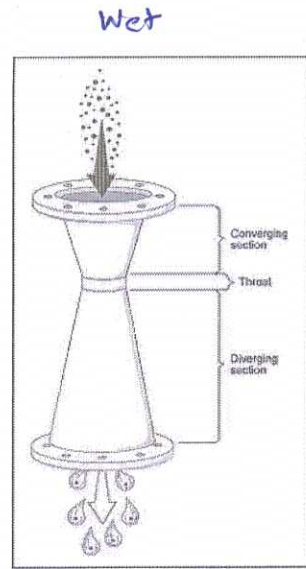
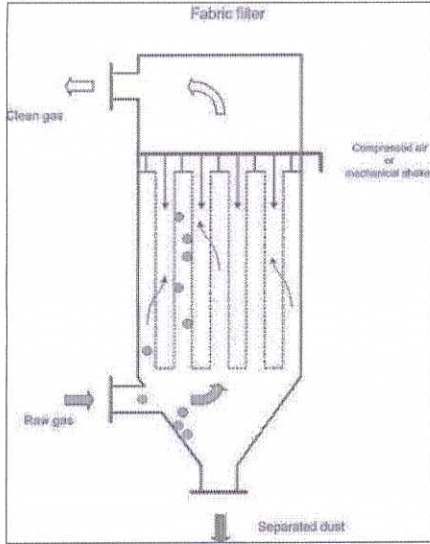
Revision :		Course Code :		
Course Title :				
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
IX (b)	Sources are: a) Industrial emission b) Motor vehicle emission c) Chemical fertilizer from land d) Heavy metals from industry e) Persistent organic pollutants f) PVC release toxic chemicals when get old	2x6 (2x4)	7	
IX (a)	a) Physical damage b) Casualties and public health c) Water supplies contamination d) Destruction of crops & food supply e) Disruption of communication lines	2x4 2x4	8	80 24

(12)

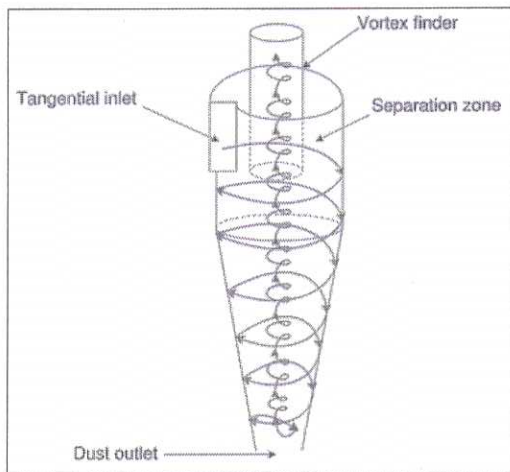
SHEME OF VALUATION
(Scoring Indicators)

Revision :		Course Code :		
Course Title :				
Qst. No	Scoring Indicator	Split up Score	Sub Total	Total
X (b)	<ul style="list-style-type: none">* Preparedness through Information, education & communication IEC* GIS & Remote sensing can be used on drought, earth quake, flood, landslide for search & rescue* Internet can be used for warning and forecasting system* Cyclone tracking using cyclone detection radar (CDR)	as 4	7	817 017

VII (b)



Electrostatic



Cyclone