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**B.TECH.**  
**(SEM VII) THEORY EXAMINATION 2021-22**  
**SOIL & WATER CONSERVATION ENGINEERING**

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

## SECTION A

1. Attempt all questions in brief.

2 x 10 = 20

Q no.	Question	Marks	CO
a.	Write causes of soil erosion.	2	1
b.	Define strip cropping.	2	1
c.	What are the different stages of gully development?	2	2
d.	Define chute spillway.	2	2
e.	What are the main difference between terrace and bunds?	2	3
f.	Define run-off.	2	3
g.	Define check dams	2	4
h.	What are evaporation losses?	2	4
i.	Enlist the different soil loss measurement tools.	2	5
j.	What do you understand by threshold velocity?	2	5

## SECTION B

2. Attempt any three of the following:

Q no.	Question	Marks	CO
a.	Define soil erosion and describe the factors influencing water erosion.	10	1
b.	Define broad base bunds and their purposes. Also discuss design procedure of graded bunds.	10	2
c.	Draw a straight drop spillway showing structural components and give the function of these components.	10	3
d.	What are the different methods used to estimate the runoff? Explain any one.	10	4
e.	What is mean by farm ponds? What are the different types of farm ponds, explain any one.	10	5

## SECTION C

3. Attempt any one part of the following:

Q no.	Question	Marks	CO
a.	Enumerate the causes and failure to adopt the new methods of erosion control.	10	1
b.	What Things are Necessary for a Good Stubble Mulch Program?	10	1

4. Attempt any one part of the following:

Q no.	Question	Marks	CO
a.	Write a short note on Slash erosion and Sheet erosion	10	2
b.	How does bunding help in soil and water conservation ? Describe the	10	2



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	method of construction of contour bund.		
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**5. Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	What is gully plugging ? Describe the technique of gully plugging..	10	3
b.	Write a short note on water logging and chemical degradation.	10	3

**6. Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	What are the applications of universal soil loss equation ? In an area subjected to soil erosion, the following information is available :	10	4
b.	In an area subjected to soil erosion, the following information is available : Rainfall erosivity index = 1200 MJ-mm/h-h-y ,Soil erodibility index = 0.20 t – ha/ha-MJ-mm. , Crop management factor = 0.60 Conservation practice factor = 1.0, Slope factor (length) = 0.1 What will be estimated annual soil loss ?	10	4

**7. Attempt any *one* part of the following:**

Q no.	Question	Marks	CO
a.	Draw a neat sketch of showing structural components of drop spillway . Enumerate its limitations and causes of failures.	10	5
b.	What are the sources of sediment ? How will you estimate them and discuss control measures in reservoirs ?	10	5