



PAPER ID-311064

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Subject Code: BCE055

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BTECH
(SEM V) THEORY EXAMINATION 2024-25
ENGINEERING HYDROLOGY

TIME: 3 HRS**M.MARKS: 70****Note: Attempt all Sections. In case of any missing data, choose suitably.****SECTION A****1. Attempt all questions in brief.****2 x 7 = 14**

Q no.	Question	CO	Level
a.	List the different types of precipitation.	1	K1
b.	Outline the concept of mean precipitation.	1	K2
c.	Name the different factors affecting flood hydrographs.	2	K1
d.	What do you understand by risk?	3	K1
e.	Define hydrologic routing.	3	K1
f.	Illustrate the term specific yield.	4	K2
g.	Name the different types of groundwater modelling techniques.	5	K1

SECTION B**2. Attempt any three of the following:****7 x 3 = 21**

Q no.	Question	CO	Level
a.	A river reach had a flood passing by. At a given instant the storage in the river was estimated as 16 ha-m. What would be the storage in the river after an interval of 3 hours if the average inflow and outflow were 15.2 m ³ /sec and 10.2m ³ /sec respectively?	1	K6
b.	Explain the double mass curve of rainfall. Also write the steps to correct the consistency of data.	2	K5
c.	What do you understand by hydrologic routing? Explain in detail.	3	K1,5
d.	Discuss mutual interference well with the help of diagram.	4	K6
e.	How does the contamination of groundwater take place? Also explain its control.	5	K1,5

SECTION C**3. Attempt any one part of the following:****7 x 1 = 7**

Q no.	Question	CO	Level
a.	What are the different forms of precipitation? Also draw a schematic section of tropical cyclone.	1	K1,5
b.	Explain the different types of precipitation with diagram.	1	K5

4. Attempt any one part of the following:**7 x 1 = 7**

Q no.	Question	CO	Level
a.	Examine time characteristics of hydrograph in detail.	2	K4
b.	Distinguish between synthetic and instantaneous unit hydrographs.	2	K4



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TIME: 3 HRS**M.MARKS: 70****5. Attempt any one part of the following:****7 x 1 = 7**

Q no.	Question	CO	Level
a.	A bridge has an expected life of 30 years and is designed for a flood magnitude of 120 years. Calculate the risk involved. What return period have to be adopted if 15% risk is acceptable.	3	K6
b.	Distinguish between rational method and empirical formula for the flood frequency studies.	3	K4

6. Attempt any one part of the following:**7 x 1 = 7**

Q no.	Question	CO	Level
a.	Name the different forms of sub-surface water. Explain with the help of diagram.	4	K1,5
b.	Explain the different types of saturated formations.	4	K5

7. Attempt any one part of the following:**7 x 1 = 7**

Q no.	Question	CO	Level
a.	Write the construction methods in detail. Also describe the operation and maintenance of water wells.	5	K1,6
b.	Explain different groundwater modelling techniques and exploration.	5	K5