

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: MTECH  
BRANCH: RS

SEMESTER : I  
SESSION : MO/19

SUBJECT: RS507 REMOTE SENSING IN HYDROLOGY AND WATER RESOURCES  
TIME: 3 HOURS

FULL MARKS: 50

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Evaluate the difference between specific yield and specific retention. Does the grain size affect them? Explain. [3+3]
- Q.1(b) Delineate comparison between the different types of groundwater bearing geologic units on the basis of their porosity and permeability. [4]
- Q.2(a) Compare the different hydrogeomorphological landforms on the basis of their groundwater potential. [7]
- Q.2(b) Describe the occurrence of different groundwater regimes in India. [3]
- Q.3(a) Explain the different types of drainage pattern in relation to the parent rock and structural features. [6]
- Q.3(b) Explain the different factors considered for interlinking of river basins. [4]
- Q.4(a) Characterize any four morphometric parameters. [6]
- Q.4(b) Evaluate the characteristics of any four groundwater recharge structures. [4]
- Q.5(a) Evaluate the potential of optical, thermal and microwave remote sensing in the delineation of flood affected area. [6]
- Q.5(b) Describe SCS-CN based rainfall-runoff modeling. [4]

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