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JBE-8193

Seat No. _____

B. Arch. (Sem. VI) (CBCS) Examination

December - 2019

Environmental Science & Services - IV

Time : **3** Hours] [Total Marks : **80+80**

Instructions : Notes to the Students Taking This Examination :

(1) Understand the question asked and maximum marks for it, and then answer accordingly.

(2) Draw diagrams or drawings as you deem appropriate for any / all questions.

(3) Do attach (staple) the page of contour map for question number 6 on page two, given as a separate page, with your answer book(s).

SECTION - I (Landscape)

1 What is Landscape? What is Landscape Architecture? What is the popular image of what landscape architects do? In what ways learning about Landscape Architecture help architects? **12**

OR

1 What is the most important instruction one must for a good site visit? What can a good site visit teach an architect? How what an architect learns from a site visit help her/ him design a building and a site better. According to you, give a good example of a building and site design that represents this "better". **12**

2 Draw a Natural System "pyramid/triangle". Label each variable properly and in the right order. Using this diagram, show what is "environment" and what is "ecology". **12**

3 Who is the author of the book Architecture in the Garden? What are the main purposes of this book? What are the different topics covered in the book? Please describe briefly, in your own words, any what ways you think is this book important for architects and why. **16**

OR

3 Who is the author of the book, An Introduction to Landscape Architecture? What are the main purposes of this book? What are the different topics covered in the book? Please describe briefly; in your own words in what any you think is this book important for architects and why ? **16**

4 Why values and experiences are important for designs of any spaces? Diagram and explain the four, (RAPT) "triggers" for initiating and developing a (site) design. Is one trigger more important than the others? Briefly explain your answer. **10**

5 What makes a space, a place? In what-ways a place can be significant? In what ways can I should an architect describe the significance of a place? Why knowing significance is vital for architects in general and a landscape architect in particular? **10**

OR

5 Briefly explain these word / terms : (Any **Four**) **10**

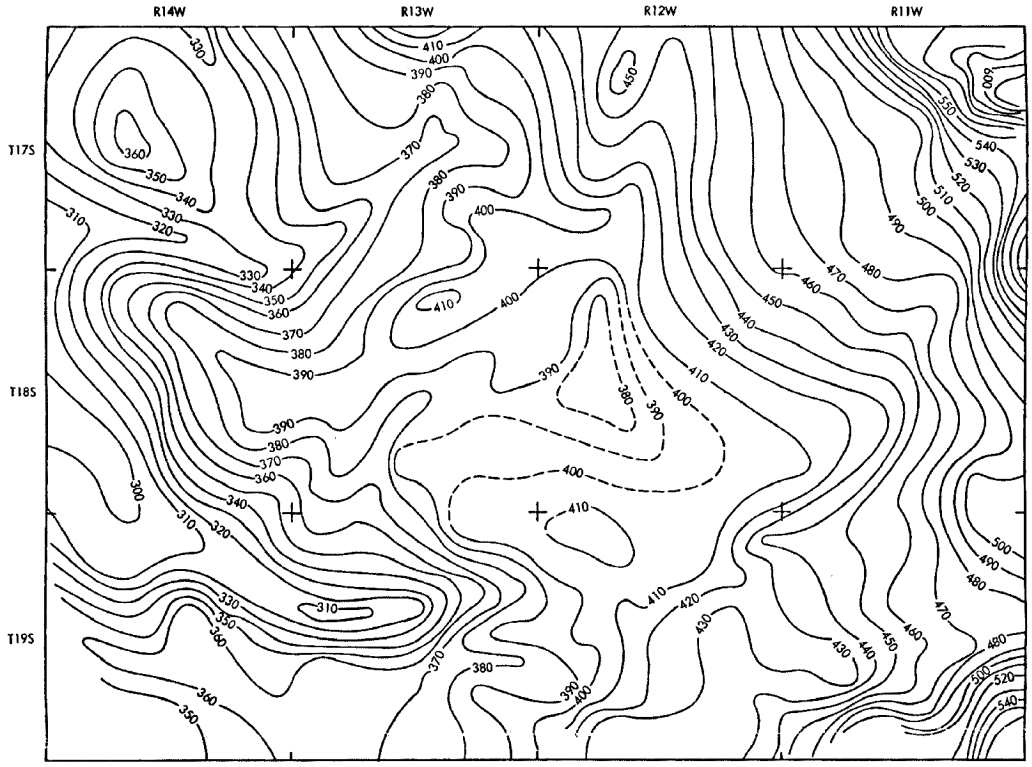
(A) Affordance,
(B) Volume (in design),
(C) Experiential Quality,
(D) Land Cover,
(E) Watershed, and
(F) Ian McHarg.

6 On this page, answer and / or draw the questions using the contour plan given below : **20**

(A) What is the contour interval of the contour plan given below?
(B) Distinctly show and label (as needed) (i) HPs and LPs, (ii) Ridges and Channels, (iii) Elevation belts of 50 meters for lower most elevations and higher most elevations, (iv) West facing aspects (assume North on the top), (v) Areas with the steepest slopes, (vi) water gathering slopes along one of the channels.

(C) Show and label areas / with high and low suitability for human activities / development. Give your reasons for choosing these areas.

Write your exam / roll number on this page and DO attach this page with your answer book before leaving the exam room.



Source: https://socratic.org/questions/how-do-contour-lines-show-hills-and-depressions

SECTION - II (HVAC)

Instruction : Attempt any four questions.

1 Give the classification of air conditioning system. Explain with neat diagram - split air conditioning system. **20**

2 Discuss various materials, shapes and construction of duct for air conditioning applications. What are the factors architect have to consider in design from the perspective of ducting system in any space? **20**

3 Explain with sketch refrigeration cycle in Window AC with neat sketch. **20**

4 Explain with Sketch : (Any **Five**) **20**

(1) AHU
(2) Referigernt
(3) Compressor
(4) Supply Air Duct
(5) Air-Filter
(6) Cooling Tower
(7) Chillers

5 Explain with neat diagram - the components of Psychrometric Chart and its use. **20**

6 What is HVAC? What are the factors to be considered for the calculating Heat Load? How much heat is removed by / ton of refrigeration ? **20**
