

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION MO22)

CLASS: MSC
BRANCH: GEOINFORMATICS

SEMESTER : I
SESSION : MO22

TIME: 03 HOURS

SUBJECT: GI503 DIGITAL CARTOGRAPHY AND GPS

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. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

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| Q.1(a) | Write the main characteristics of a good map. | [CO1 BL-2] | [3] |
| Q.1(b) | What are the types of projections? Name the projection used by the Survey of India in the Open series map | [CO3 BL-3] | [3] |
| Q.1(c) | Write the salient points of Universal Transverse Mercator. | [CO2 BL-1] | [4] |
| Q.2(a) | What kind of data can be incorporated in Digital Cartography. Name any four such sources. | [CO3 BL-2] | [3] |
| Q.2(b) | Differentiate between spatial and non-spatial database. | [CO3 BL-2] | [3] |
| Q.2(c) | Explain the concept of DPI giving an example. | [CO3 BL-2] | [4] |
| Q.3(a) | Name any two colour systems. Illustrate the RGB colour cube. | [CO1 BL-2] | [2] |
| Q.3(b) | Write a note on Map Lettering | [CO1 BL2] | [3] |
| Q.3(c) | What are Bertin's variables? Illustrate | [CO3 BL-4] | [5] |
| Q.4(a) | What are the functions of the control segment? | [CO4 BL-2] | [2] |
| Q.4(b) | Write the main characteristics of NAVSTARGPS | [CO4 BL-3] | [3] |
| Q.4(c) | How does a GNSS receiver obtain its positioning? | [CO4 BL-3] | [5] |
| Q.5(a) | What are the types of datum? | [CO5 BL-2] | [2] |
| Q.5(b) | Describe Everest 1956 datum | [CO2 BL-3] | [3] |
| Q.5(c) | What is DOP? How does satellite geometry affect positioning accuracy? | [CO2 BL-4] | [5] |

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