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B.TECH (CE)

SIXTH-SEMESTER

MID- SEMESTER EXAM

MARCH-2019

CE310- GEO-TECHNICAL - PROCESS

TIME- 1.1/2 Hours

Max-Mark-30

NOTE- Answer any three questions. Question No 5 IS Compulsory
Assume suitable missing data IF any.

1. Answer all the following questions

(10)

(A) What is collapsible soil? Give an example of merit and demerit of airport Construction of india?

(B) what is an expansive soil? Explain an example of advantages and disadvantages of metro and monorail Construction of india?

2. Answer all the following questions

(10)

(A) What are the modern principles of Geotechnical - process tests usually conducted to assess the swelling pressure of more than 123 storey building on expansive soil?

(B) What are the basic approaches used to reduce or prevent the effects of free index swelling on collapsible soil on signal tower structures?

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3. Answer all the following questions.

(10)

(A) Discuss the field tests commonly used in geotechnical - process investigation on expansive soil on Nuclear atomic structures of India?

(B) What are the earthquake and landslide circumstances which make the geotechnical - process on sandy soil data misleading when used for explorations of negative skin friction and smear effect of collapsible or dune sand behaviour of sea shore structures of India and Hong - Kong?

4. Answer all the following questions

(10)

(A) What is meant by the significant depth of airport modern project of geotechnical process? Explain details about the determination of the depth of exploration below 11m sea mean level during winter and summer periods?

(B) Explain merit and demerit of ground improvement techniques? Discuss stone columns and grouting of dune sand soils?

5. Answer all the following TRUE or FALSE questions.

(10)

(A) Mango tree plantation close to a high rise structure helps swelling-geotechnical- process during summer.

(B) geotechnical- process for ultimate bearing capacity value exceeding 77 kN/m^2 ensures trouble free performance for collapsible soil.

(C) In India the area covered by collapsible soil is about 66%

(D) Field tests are most useful for fine-grained soil-geotechnical process

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- (E) Laboratory test are very useful for stone column
- (F) A lime- stabilization test is useful for coarse grained expansive soils
- (G) Thermal-stabilization are mainly useful for construction of signature bridges
- (H) Generally raft foundation-geotechnical process are more costly than mat foundations geotechnical process.
- (I) Sheepsfoot roller are most suitable for collapsible soil-geotechnical-process construction.
- (J) Is- 1892-,1979 code of practice geotechnical process for super structures.