

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

M.Tech-2 Semester (CSE/IT/ECE/CE)

COURSE CODE(CREDITS): 10M11CE212

MAX. MARKS: 15

COURSE NAME: Heavy/Civil Construction Equipment, Methods, and Management

COURSE INSTRUCTORS: Dr. Amardeep

MAX. TIME: 1 Hour

Note: Attempt All the Questions. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. How should the safe operation be increased while working with heavy equipment?
Discuss in detail along with all the safety measures. (3)
2. An average operator has to excavate damp sand with a clamshell of 2.0 m^3 . The digging depth is 10m and the swing angle will be 120 degrees. The sand is added into trucks and actual working time is 50 min/hr. (5)
3. A self-propelled tamping foot compactor will be used to compact a fill being constructed of clay material. Field tests have shown that the required density can be achieved with four passes of the roller operating at an average speed 3 mph. the compacted lift will have a thickness of 6 in. The compacting width of this machine is 7 ft. one bcy equals 0.83 ccy. The scraper production, estimated for the project is 510 bcy/hr. How many roller will be required to maintain this production? Assume a 50 min hour efficiency. (2)
4. What do you mean by soil stabilization? Discuss in details by focusing on the different factors influencing the stabilization of soil. Make a list of different compaction equipment also. (5)