

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2026

M.Tech-IInd Semester (CE)

COURSE CODE (CREDITS): 10M11CE212(3)

MAX. MARKS: 35

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

COURSE INSTRUCTORS: Dr. Amardeep

MAX. TIME: 2Hour

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	How should the safe operation be increased while working with heavy equipment? Discuss in detail along with all the safety measures.		5
Q2	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
Q3	Make a detail discussion about the different types of pile foundation technique along with their application.		5
Q4	What do you mean by hauling equipment? Discuss in detail.		5
Q5	Make a list of different excavation equipment along with their applications.		5
Q6	What are the different geological characteristics required to consider prior to the blasting? Discuss in detail.		5
Q7	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.		5