BHARTIYA INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT of CIVIL ENGINEERING

Sub.:→ Project planning & Construction management (8CE3A)

M.M. → 20

Q.1. (A) Define arbitration and its advantages. (5)

Ans. Arbitration is the process of the settlement of a dispute not by a regular and ordinary court but by impartial referees (who are called Arbitrations) selected or agreed upon by the parties concerned.

Disputes may arise between the contractor and the owner because of several factors such as recovery on account of alleged delays, defective works or excess consumption if materials etc. Misrepresentation of P.

roject plans, specification and contract clauses are bound to come up during the progress of the work.

The only way of of solving such situation is through law courts or ar-bitration. But the complex system of judgement through law court is ex-termely time consuming extending through years. So in the interest of parties, a quicker disposal of such cases is highly imperative which is ac-complished by the process of arbitration.

Arbitrator is a person chosen by the parties themselves to whom the disputes and differences are reffered to. Arbitrator acts as a judge and gives his judgement which is binding on both parties.

(B) Differentiate between Earnest money deposit and security money deposit. (5)

Ans→ Earnest money deposit :- At the time of submitting tender, the tenderer is required to deposit about 2% of the eastimated cost of the contract value of the Project with the department. This amount is known as Earnest money deposit (EMD). This money is collected in order to avoid the refusal from the contractor to accept the contract, once the contract is awarded to him. It is also collected to avoid unnecessary competition by avoiding the contractors, who may not have sound financial status. If the lowest quoted contractor refuses to take up the work, his E.M.D will be forfeited. However the E.M.D of unsuccessful contractors will be refunded to them.

→ Security Money Deposit :- After the acceptance of the tender of a contractor, the contractor has to deposit about 10% of the tender amount with the client. This amount is inclusive of the 2% amount already deposited by him. This deposit is called security deposit (S.D.). This deposit serves as a guarantee that the contractor will perform the work as per specifications and also will maintain ~~at~~ satisfactory progress. This deposit usually is refunded to the contractor after 6 to 12 months from handing over the work to the client.

Q.2.(A) Write safety measures for Excavation. (5)

Ans.(i) Prior to excavation work, a complete knowledge of underground structures such as sewers, water pipes, gas mains etc. is essential so as to proper precaution to prevent any accidents.

(ii) The workers must be provided with all protective devices,

(iii) When depth of excavation exceeds 2m, the trenches should be securely shored and timbered.

(iv) Sheating should be placed against the side of trench. In case of loose or soft soil, sheathing should be driven into the bottom of to trench.

(v) Excavated materials should be kept away from the edge of the trench.

(vi) Heavy equipment such as excavating machineries, trucks etc. shout be kept away at a suitable distance from the excavated sides.

(vii) A fence or barricade should be erected and at night the area must be properly lighted.

(B) Define environmental impact assessment of construction Projects. (5)

Ans. • Change of Landuse:
Agricultural / Rural / waste land to Urban / Residential / Commercial land.
Redevelopment of existing urban land from single storey structure to high-rise / high density structure

- Direct Impact - On the plot of land.
- Indirect Impact - On neighbouring plots.

- Cumulative Impact – On the surrounding area which will gradually change.
- Removal of topsoil due to excavation will lead to high water requirment for future landscape purpose and will prevent the growth of native plant species.
- change in topography of the area will mean change in drainage patterns of the area.
- Reduced ground water recharge due to increase of hard surfaces.
- Construction activities create dust / air pollution.
- Heavy machinery used generates noise pollution.
- Urbanized areas lead to a temperature rise of 1-2°C due to higher absorptive surfaces.