**D 51609** (Pages 2) Name.....

Reg. No.....

# FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2008

CE 04 507—CIVIL ENGINEERING DRAWING II

(2004 admissions)

Time : Three Hours Maximum : 100 Marks

*Question* 1 *is* **compulsory.**

*Answer any* **one** *question of* 2A, *or* 2B.

1. It is proposed to construct a single storey three bed room residential building on a site (which is a corner site) measuring 15m in N-S direction and 20m in E-W direction. As per the existing building byelaws of the region, minimum set backs for this building are 3m in the front, 1.5m in the rear and in the sides it is 2m on each side. Front (main entrance) door for building can be provided facing the north direction or facing west direction as per architectural requirements of the building designer. Following are the main requirements of the owners :

   (i) Two bed rooms, each of about $15m^2$ floor area. Arrange two attached toilets (water closets) of equal size in between these two bedrooms.

   (ii) One master bed room of about $20m^2$ floor area.

   (iii) A dining cum living of about $25m^2$ floor area.

   (iv) Kitchen of about $15m^2$ floor area.

   (v) A store room of $10m^2$ floor area.

   (vi) Bath of atleast 8m floor area.

   (vii) A common toilet for the building, beside the bath, measuring atleast $2m^2$ floor area.

   (viii) A front verandah of about $12m^2$ floor area.

Specifications are :

FOUNDATIONS : Foundations are to be taken 0.9m below ground level for 30 cm thick walls and 0.6 for partition walls which shall be 10 cm thick. The base course shall be of CC1:4:8, 0.3m thick and 1.0 wide, Two courses of RR masonry are to be provided, each 300 mm thick with suitable offsets. Basement shall be of SS masonry 0.4m thick and 0.6m high. Wall between toilets (water closets) and the wall between bathroom and WC are 10 cm thick.

SUPERSTRUCTURE : Brick walls in CM 1 : 6 and 3.75 m high.

ROOFING : 1 : 2 : 4 RCC slab 10 cm thick with a weathering coat provided over it.

FLOORING : Flooring is 150 mm thick PCC of 1 : 4 : 8 finished with ceramic tiles over 10 mm thick. CM 1 : 3.

Turn over

DOORS AND WINDOWS :

D 1.2 m × 2.1 m

D1 0.9 m × 2.1 m

W 0.9 m × 1.2 m

V 0.6 m × 0.6 m

Assume any additional data required (regarding specifications only) appropriately.

Draw site plan and the following views to a suitable scale: Plan, Elevation and a typical section giving maximum details.

(80 marks)

2. (A) For the building planned by you in Questions (1), making use of the same site plan, show the service plan for services like water supply, sewage disposal and electric supply.

(20 marks)

*Or*

(B) Draw the plan and L-section of a septic tank to a suitable scale. (20 marks)