

# MODEL QUESTION PAPER

FIRST AND SECOND SEMESTER

EN010 106: BASIC CIVIL ENGINEERING

Time: Three Hours

Maximum: 100 Marks

## PART A

ANSWER **ALL** QUESTIONS

1. What are Bogues compounds.
2. What do you understand by “Grade of concrete”.
3. Define the bearing capacity of soil.
4. What is ranging.
5. Explain (i) floor area ratio (ii) Built up area (5X3=15)

## PART B

ANSWER **ALL** QUESTIONS

6. Why it is recommended to use seasoned timber. List the different methods of seasoning.
7. Explain the roofing materials generally used for industrial buildings.
8. Where the following foundations are recommended  
(i) Grillage foundation (ii) Raft foundation and (iii) Pile foundation.
9. What is local attraction. Explain how local attraction of a closed traverse PQRSP can be eliminated.
10. What is the necessity of understanding basic concepts of green buildings and intelligent buildings. (5X5=25)

## PART C

11. Explain manufacturing of cement.

OR

12. Explain the classification of aggregates.

13. Draw the details of an AC sheet roof for an industry

OR

14. Explain in detail the preparation of concrete.

15. List the functions of foundations. What are the different types of foundations. Draw diagrams of any four types of foundations.

OR

16. Differentiate between English bond and Flemish bond in brick masonry. What are the situations under which stone masonry is preferred. Briefly explain random rubble masonry.

17. The following staff readings were taken successively with a level, the instrument being shifted after third, sixth and eighth readings:-

1.235, 2.140, 0.785, 2.135, 2.845, 1.375, 0.625, 1.978, 2.312, 2.517.

Enter the above reading in a page of a level book and find the RL of points if the first reading was taken with a staff held on a bench mark of 415.374m. Apply necessary arithmetic checks.

OR

18. Determine the values of included angles in a closed compass traverse ABCD in the clockwise direction, given the following fore bearings of their respective lines:

| Line | AB              | BC              | CD               | DA                            |
|------|-----------------|-----------------|------------------|-------------------------------|
| F.B  | 40 <sup>0</sup> | 70 <sup>0</sup> | 210 <sup>0</sup> | 280 <sup>0</sup> Apply check. |

19. Discuss the salient features of the Kerala Municipal Building Act .1999.

OR

20. Explain the disposal of domestic waste water through septic tank and soak pit.

(5X12=60)