



Sanjay Ghodawat University, Kolhapur

2017-18

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

FY B Tech

School of Technology

Semester II

FYT 106

Element of Civil Engineering

Max Marks: 100

~~MAY 2018~~ JUNE

End Semester Examination (ESE)

Time: 3 Hrs

1 June 2018

10:30 AM to 1:30 PM.

Instructions for Students: 1) Use of non-programmable calculator is allowed
2) All questions are compulsory

- Q1** **Solve any Two** **Marks** **COs**
- | | | | |
|----|--|----|-----|
| a) | Write differences between load bearing structure and framed structure. | 09 | CO1 |
| b) | Explain the importance of civil engineering field to allied branches of engineering. | 09 | CO1 |
| c) | Enlist & explain various types of loads coming over the structure. | 09 | CO1 |
- Q2**
- | | | | |
|-----------|---|----|-----|
| a) | Write a note on objectives of building bye laws . | 04 | CO2 |
| b) | Explain the following principles of planning.
i) Aspect iii) Privacy
ii) Prospect iv) Roominess | 12 | CO2 |
| OR | | | |
| b) | Explain the following building bye laws.
i) Built up area iii) FSI
ii) Building line & control line iv) Height of building | 12 | CO2 |
- Q3**
- | | | | |
|----|---|----|-----|
| a) | Enlist types of foundation and explain any one in detail with sketch | 04 | CO3 |
| b) | Draw a neat sketch of components of building. Explain components of superstructure with their their function. | 12 | CO3 |
- Q4** **Solve any Two** **Marks** **COs**
- | | | | |
|----|--|----|-----|
| a) | Explain various principles of surveying with sketches | 09 | CO4 |
| b) | The distance measured between two points with 30 m and 20 m chains was 215m and 218 m respectively. If the 30 m chain was 9 cm too short , find the error in 20 m chain. | 09 | CO4 |

- c) The following bearings were taken with a prismatic compass in running a closed traverse 09 CO4
- i) Find correct F.B. & B.B.
 - ii) At what stations do you suspect local attraction?
 - iii) Find out included angles.

Line	FB	BB
AB	53° 00'	233° 00'
BC	143° 00'	321° 30'
CD	221° 30'	40° 30'
DA	330° 30'	153° 00'

Q5

- a) Explain any four characteristics of contour. 04 CO5
- b) Rule out a page of level book to enter following reading on continuously sloping ground at 30 m interval. The RL of first point was 555.550 m. Calculate reduction levels by Rise and Fall method. Apply usual checks. Determine gradient as the line joining first and last station 12 CO5
- 3.995, 2.875, 1.690, 0.495, 3.800, 2.785, 1.480, 3.775, 2.750

OR

- b) Rule out a page of level book to enter following reading on continuously sloping ground at 20 m interval. The RL of first point was 101.910 m. Calculate reduction levels by HI method. Apply usual checks. Determine gradient as the line joining first and last station 12 CO5
- 1.880, 2.670, 3.750, 0.780, 2.170, 2.250, 3.975, 1.410, 1.580, 2.525

- Q6** a) Explain c/s of railway track with neat sketch. 04 CO6
- b) Explain water supply scheme in detail with sketch. 12 CO6
