

## Model Questions

### Subject : Basic Civil & Engg. Mechanics (BE-204)

#### Unit 1

- 1) How workability of concrete can be increased.
- 2) What is white cement? How is it manufactured.
- 3) What are the various field tests carried out for bricks.
- 4) Describe various defects in timber with help of neat sketches.
- 5) Explain the method of plastering on wall. Also write the advantages of plastering.
- 6) What do you mean by M-30 concrete? Explain
- 7) What are the objectives for providing foundation in the building? Draw a neat sketch of RCC circular column footing with details of column and pedestal.

#### Unit 2

- 1) Stating various types of bench marks, define G.T.S. bench mark.
- 2) What do you mean by transit and non transit theodolite?
- 3) Prove that the curvature and refraction errors are eliminated in reciprocal leveling.
- 4) State various conventional methods of distance measurement. Write two advantages and two disadvantages of conventional methods of measurement.
- 5) Following consecutive readings were taken on a continuously sloping ground at regular interval of 30m. Find the gradient joining first and last point (using 3m leveling staff) 1.370m, 2.055m, 2.760m, 0.455m, 1.110m, 1.875m, 2.57m, 0.305m, 0.995m, 1.685m. Enter the above readings of field and level book. Deduce RL of intermediate points using H.I. method.
- 6) What are the advantages and disadvantages of plane table surveying?

#### Unit 3

- 1) State various applications of Remote Sensing.
- 2) Explain How contour maps can be used to draw cross sectioning and to find out capacity of a reservoir.
- 3) Numericals based on area of offset and formation level.
- 4) What are the selection criteria of survey station?
- 5) What are the characteristics of contour line?

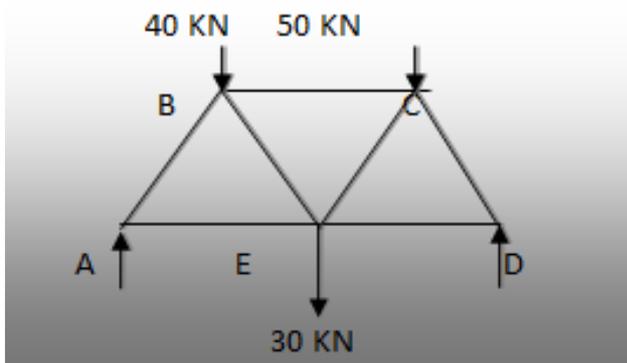
#### Unit 4

- 1) What is redundant frame?
- 2) What are the various types of forces?

3) What are the assumptions made while analysing a frame?

4) Explain polygon law and lami's theorem.

5) Numericals on truss and lami's theorem



$\angle A = 60^\circ$   $\angle BEA = 60^\circ$   $\angle D = 30^\circ$   $\angle CED = 60^\circ$   $AD = 5\text{m}$

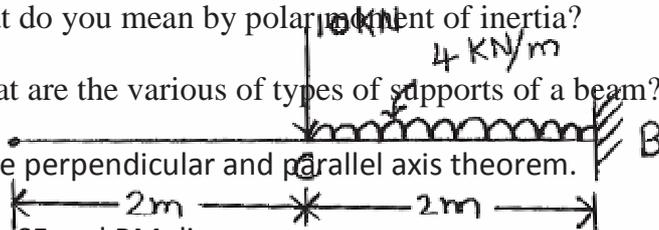
### Unit 5

1) What do you mean by polar moment of inertia?

2) What are the various types of supports of a beam?

3) State perpendicular and parallel axis theorem.

4) Draw SF and BM diagram



5) Determine the moment of inertia about centroidal axis x-x and y-y of the channel section as shown in figure below.

