

**SECOND YEAR KGCE EXAMINATION IN CIVIL ENGINEERING**  
**CIVIL ENGINEERING-2 (TRADE THEORY)**

**MODEL QUESTION PAPER SET-2**

(Time : 3 hours)

(Maximum Marks: 60)

**PART-A**

*(There should be at least 3 questions from each module)*

(Maximum Marks: 20x1 Marks = 20 Marks)

- I. Answer the following questions by choosing the correct answer from the options given below.  
 Each question carries 1 mark.

<b>Q No</b>	<b>Question</b>	<b>Module</b>
1	method is generally used in: a) Setting out work b) Drawing of map c) Plinth Area calculation d) Earthwork computation	M 1.1
2	In the mid-section formula: a) The mean depth is the average of depths of two consecutive sections b) The area of mid-sections is calculated by using mean depth c) The volume of the earth work is calculated by multiplying the mid-section area by the distance between the two original sections d) All of the above	M 1.2
3	Cross section of earthwork of road in banking is in the form of trapezium. Name the method to calculate the quantity of earthwork. a) Longitudinal Formula b) Triangular Formula c) Quadrilateral Formula d) Prismoidal Formula	M 1.2
4	While estimating for plastering, usually no deduction is made for: a) End of Rafters b) Ends of beams c) Small openings upto 0.5 sq.m d) All the above	M 2.1
5	The useful liveable area of a building is also known as a) Circulation Area b) Carpet Area c) Plinth Area d) Floor Area	M 2.1
6	The number of bricks of size 20cm x 10cm x 10cm required for 100 cubic metres of masonry wall is: a) 50000 b) 1000 c) 500 d) 10000	M 2.1
7	The unit of measurement for concrete work in RCC is: a) m <sup>2</sup> b) m <sup>3</sup> c) 10 m <sup>3</sup> d) m	M 2.1
8	In a detailed estimate, the provision for contingencies is usually: a) 15% b) 1% c) 3% - 5% d) 8% - 12.5%	M 2.1
9	Which instrument with its telescope can be revolved through 180° in a vertical plane about its horizontal axis? a) Dumpy level b) Non-Transit theodolite c) Auto level d) Transit theodolite	M 3.1
10	What is referred to smallest measurable unit in theodolite? a) Double sighting b) Swing	M 3.3

	c) Least count	d) Contouring	
11	How many types do theodolites classified? a) 2 c) 3	b) 5 d) 4	M 3.1
12	The purpose of focusing in Theodolite is to _____ a) Eliminate parallax error c) Minimize the error	b) Level the Telescope d) None of the above	M 3.2
13	What is the term, while the vertical circle is on the right of the telescope and the target on the telescope is down in Theodolite? a) Telescope Forward c) Telescope backward	b) Telescope Normal d) Telescope Inverted	M 3.2
14	How many leveling screws carry the upper plate of Theodolite? a) 2 Screws c) 3 Screws	b) 4 Screws d) 6 Screws	M 3.1
15	GPS refers to _____ a) Graphic Position System c) Global Positioning System	b) General Positioning System d) None of the above	M 4.3
16	A Total station is: a) Electronic distance meter c) Microprocessor electronic data collector d) Integration of all the above	b) electronic theodolite	M 4.2
17	Electromagnetic distance measurements instruments are _____ a) Microwave instruments c) Visible light instruments	b) Infrared instruments d) Any of the above	M 4.1
18	In total station, data is stored in: a) Pen drive c) Data card	b) Micro processor d) External hardware	M 4.2
19	When total station is sighted to the target, which of the operation acts first? a) Rotation of optical axis c) Rotation of horizontal axis	b) Rotation of vertical axis d) Rotation of line of collimation	M 4.2
20	The data obtained from total station can be used in which among the following software directly? a) STAAD PRO c) Autodesk Revit	b) Primavera d) Surfer	M 4.2

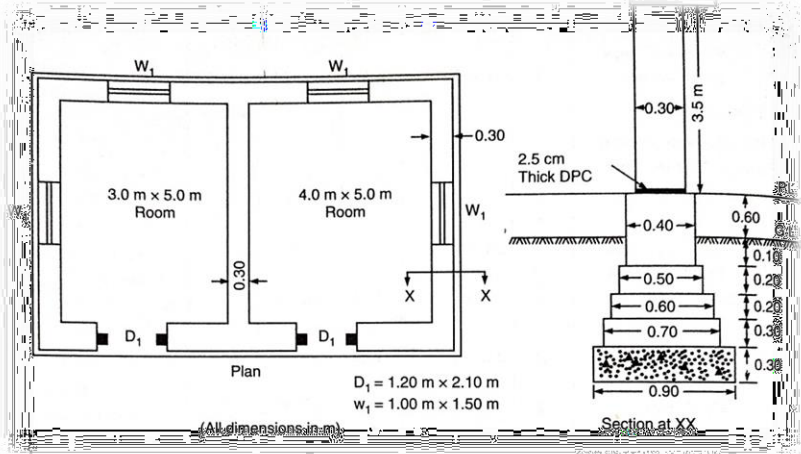
**PART-B**

*(There should be at least 2 questions from each module)*

(Maximum Marks: 8x5 Marks = 40 Marks)

II. Answer *any eight* questions from the following. Each question carries marks.5 Marks.

Q No	Question	Module
1	Compare Trapezoidal and Prismoidal formula for earthwork computation.	M 1.2
2	Calculate the quantity of earthwork for 200m length for a portion of a road in an uniform ground the heights of banks at the two ends being 1.00m and 1.60m. The formation width is 10m and side	M 1.2

	<p>slopes 2:1 (Horizontal: Vertical). Assume that there is no transverse slope. Use</p> <p>a) Mid Sectional Formula b) Mean Sectional Formula</p>	
3	<p>Prepare a Preliminary estimate of a building project with a total plinth area of 1500 sq.m. Given that:</p> <p>a) Plinth Area Rate – Rs.950/m<sup>2</sup> b) Extra for Special Architectural treatment – 1.5% of building cost c) Extra for Water supply and Sanitary Installations – 5% of building cost d) Extra for Internal Installations – 14% of building cost e) Extra for services – 6% of building cost f) Contingencies – 3% g) Supervision charges – 8%</p>	M 2.1
4	<p>Calculate the quantities of the following items of a two roomed building as per the Plan &amp; cross section given.</p> <p>a) Earthwork Excavation in Foundation b) Concrete in Foundation</p> 	M 2.1
5	Compare Centre Line method and Long wall – short wall method	M 2.1
6	Describe temporary adjustments in a Theodolite.	M 3.2
7	Explain the procedure of Horizontal angle measurement using Theodolite.	M 3.3
8	Describe briefly Global Positioning System.	M 4.3
9	Write short note on EDM.	M 4.1
10	List out the advantages of using Total station.	M 4.2
11	Describe important functions of Total Station.	M 4.2
12	<p>Define the following terms in relation with Theodolite surveying.</p> <p>a) Centring b) Transiting c) Swinging the Telescope d) Changing face e) Face left observation</p>	M 3.1