

ARYA COLLEGE OF ENGINEERING
GUESS PAPERS
(B.Tech II Semester 2025-26)
2FY3-09 BASIC CIVIL ENGG.

Unit 1:

Short Answers:(2 Marks Each)

Q. 1 What is "Surveying".	2023
Q. 2 Define longitude and latitude of a line.	2023
Q. 3 Differentiate between Plans and Maps.	2022
Q. 4 Differentiate between Fore sight, Back sight and Intermediate sight .	2023
Q. 5 Explain WCB and QB system with neat sketch.	
Q. 6 Differentiate between Fore bearing and Back bearing.	
Q. 7 Explain the terminology used in leveling.	2022, 2018
Q. 8 What is ranging of surveying line.	
Q. 9 What do you understand by Infrastructure development.	
Q.10 Enlist different types of chain & tapes.	
Q.11 Write the name of two instrument used in linear measurements.	2023

Descriptive Answers: (5 to 20 Marks)

Q. 1 What are the fundamental Principles of Surveying? Explain briefly.	2023
Q. 2 Explain tape corrections in detail with formula.	2022, 2021
Q. 3 What is the role of Civil Engineers in Society? How can you correlate the infrastructural development with the economy of that country?	2022, 2019
Q. 4 The Following staff reading were observed successively with a level, the instrument having been moved after third, sixth and eighth reading : 2.228 ; 1.606 ; 0.988 ; 2.090 ; 2.864 ; 1.262 ; 0.602 ; 1.982 ; 1.044 ; 2.684 meters. Calculate the R.L. of points with the H.O.I method if the first reading was taken at a bench mark of 432.384 m.	2018
Q. 5 What is the method of ranging out survey lines? with suitable figure	2018 , 2021
Q. 6 Explain the different branches of civil engineering in brief.	2019
Q. 7 A 20 meter long tape was used to measure a base line. Find the total correction per tape length. Tape is standardized at a temp of 25°C and pull of 12Kg. The pull applied at field was 18Kg and temp at the time of measurement was 18°C. Weight of the tape is 0.94kg , unit weight of tape material is 7.86 gm/cm ³ and coefficient of thermal expansion is 7×10^{-6} per °C. The modulus of elasticity of tape material is 2.06×10^6 kg/cm ² .	
Q.8 Convert the following bearing into another system :	
1) 115° 3) S 15° W	
2) 325° 4) N 55° W	

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Q.9 The following bearings were observed with the help of a prismatic compass. Calculate the all interior angles of traverse ABCDEA.

Line	AB	BC	CD	DE	EA
Fore Bearing	105°15'	20°00'	316°30'	187°15'	122°45'

Q.10 Enlist different types of chain & tapes.

Q.11 Write short note on 'Total Station'.

Q.12 Elaborate the chaining method on sloping ground.

Q.13 A 20 m chain was used to measure a survey line and length was found to be 327 m . The chain was found afterwards 3cm too long. What was the true distance or corrected length of survey line.

Unit 2:

Short Answers:(2 Marks Each)

Q. 1 What are the types of building given by NBC?	2018
Q. 2 Discuss the difference between carpet area and plinth area?	2021,
2023	
Q. 3 What is site plan? Which is the information to be included in site plan?	
Q. 4 Explain the role of lintel and sill in superstructure.	2018, 2022
Q. 5 Define floor area index.	2019, 2018
Q. 6 Write down the different parts of superstructure.	2018, 2022

Descriptive Answers: (5 to 20 Marks)

Q. 1 Explain the concept of sunlight and ventilation.	2018
Q. 2 Explain the different building bye laws.	2018, 2023
Q. 3 Explain the concept of R.C.C.	2018, 2018, 2019
Q. 4 Explain types of shallow and deep foundation with neat sketch.	
Q. 5 Explain the different Factors one need to consider while selecting a site for building?	
	2019
Q. 6 Explain the different components of building.	2018, 2022
Q. 7 Explain 'how Orientation affects the ventilation of a building'.	2023

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Unit 3:

Short Answers:(2 Marks Each)

Q. 1. Explain the causes of accidents.	
Q. 2 Write short note on ‘Transportation Engineering’.	
Q. 3. Why road traffic signs are used?	2018, 2019
Q. 4 Give some measures to decrease the accidental rates.	2018, 2018, 2022
Q. 5 Draw some mandatory signs.	2018, 2019

Descriptive Answers: (5 to 20 Marks)

Q. 1 Explain types and characteristics of various modes of transportation	2018, 2022 ,2019, 2021
Q. 2 Explain road safety measures.	2018, 2018, 2022
Q. 3 Write a short note on road traffic signs. (Draw diagrams)	2018, 2019
Q: 4 Explain the remedial measures to prevent the accidents.	2018, 2018, 2022
Q :5 Explain the different types of traffic sign.	2018, 2019

Unit 4:

Short Answers:(2 Marks Each)

Q. 1 Draw Hydrological cycle , carbon cycle and nitrogen cycle.	2019, 2021
Q. 2 Define “Biodiversity”.	
Q. 3 What do you mean by “Ecosystem” ?	
Q. 4 Explain the any three characteristics of drinking water.	2019, 2021
Q. 5 Draw pyramid of energy flow.	2019
Q. 6 What is flow of energy flow in ecosystem.	2019, 2023

Descriptive Answers: (5 to 20 Marks)

Q. 1 Explain the environmental act and regulations.	2021
Q. 2 Enlist any four important chemical characteristics of raw water. Mention the method of analysis and its acceptance value as per water Quality standards of any two of them.	2023
Q. 3 Explain the different components of environment in brief.	
Q. 4 What are the effects of oxygen demand on water? Explain in detail.	
Q. 5 Explain the waste water treatment process in brief.	2021

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Q. 6 Explain reuse and saving concept of water.	2018
Q. 7 Explain the any two method of Rainwater Harvesting.	2018, 2022

Unit 5:
Short Answers:(2 Marks Each)

Q.1 Write a short note on followings :	
(a) Landfill site selection	
(b) Incineration	2021
(c) Generation of energy from solid waste	2021
(d) Bio remediation	
(e) Onsite Handling	
(f) Garbage and Rubbish	

Descriptive Answers: (5 to 20 Marks)

Q. 1 Describe the various types of classifications of solid waste.	2021
Q. 2 Explain Global warming and green house effect.	2021
Q. 3 Describe various collection systems. What are the advantages and disadvantages of door-to door collection system?	2021
Q. 4 Explain causes and effects of air pollution.	
Q. 5 Explain the ozone layer depletion.	2022
Q. 6 Explain the disposal method of solid waste.	2021
Q. 7 Explain the methods of noise pollution in detail.	2023
Q. 8 Elaborate causes of thermal and radioactive pollution.	