



GIET UNIVERSITY, GUNUPUR - 765022
B. Tech (Sixth Semester Regular) Examinations, May - 2024
21BCVPE36001- Advanced Concrete Technology
(Civil)

Time: 3 hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

PART – A**(2 x 5 = 10 Marks)**Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What are accelerators and mention its purpose?	CO1	K2
b. What is the effect of Water / Cement ratio on workability and strength	CO2	K2
c. Define workability of concrete?	CO3	K1
d. Write about durability of concrete?	CO4	K2
e. What is polymer concrete?	CO4	K2

PART – B**(15 x 4 = 60 Marks)**Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Explain about the different tests conducted on cement in the laboratory to check its suitability.	8	CO1	K3
b. What are the properties of good aggregates for making concrete and discuss in brief various tests carried out on aggregates?	7	CO1	K3
(OR)			
c. List out various tests on aggregates. Explain it.	8	CO1	K2
d. Explain what is meant by bleeding of concrete? Explain it.	7	CO1	K2
3.a. What are different tests for measurement of workability? Explain it.	8	CO2	K2
b. Explain procedure for determination of workability of concrete using Slump cone test with neat diagram.	7	CO2	K2
(OR)			
c. What are the factors affecting water cement ratio? Explain it	8	CO2	K2
d. Write the steps in the manufacture of concrete. Explain it.	7	CO2	K2
4.a. Discuss about the rebound hammer test method on concrete structures and its limitations.	8	CO3	K3
b. What are the factors affecting the strength of hardened concrete? Explain it.	7	CO3	K2
(OR)			
c. What are the factors affecting the strength of concrete? Explain it.	8	CO3	K2
d. Write about different special concretes. How they are different from conventional concrete? Explain it.	7	CO3	K3
5.a. What are the factors affecting the properties of fibre reinforced concrete? Explain in detail.	8	CO4	K3
b. What are the factors for choosing mix proportions? Explain it.	7	CO4	K2
(OR)			
c. What is self-compacting concrete? Explain it.	7	CO4	L2
d. What are the different steps in the BIS method of mix design?	8	CO4	L3

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