

THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY

End Semester examination

CE-001, Building Materials and Construction

Time: 3hrs

M.M: 45

Note: Attempt any five questions

- 1a) How are rocks chemically classified?
b) With the help of neat sketch, explain the working of Hoffman's kiln. (4,5)
- 2a) Comment, "Moulds are made longer by about 8-12% in all directions in brick manufacturing".
b) How does cement set? What are the functions of four principal minerals?
c) With the help of neat sketch explain the functioning of ball mills and tube mills in cement manufacturing. (2,3,4)
- 3a) What is fine aggregate? What are different types of fine aggregates used in mortar and concrete? Discuss each
b) Write short notes on X-ray shielding, fire resistant and light weight mortar. (5,4)
- 4 a) Describe the part played by quantity and quality of water used in concrete.
b) What is curing and how does it affect the strength of concrete.
c) What precautions will you take in placing and compacting concrete? (3,3,3)
- 5 a) What is meant by industrial timber? What are its varieties?
b) What are the objects of preservation of timber? Discuss the methods adopted for preservation of timber? (4,5)
- 6 a) What are the principles of comfort air conditioning? Give line sketches to illustrate the summer and winter air conditioning.
b) Define the following with the help of neat sketches
i. Baluster ii. Handrail iii. Riser iv. Landing (4,5)
7. Differentiate between
a) Fat lime and hydraulic lime
b) Varnish and distemper
c) Strap foundation and Strip foundation (3,3,3)