

St. Joseph's College (Autonomous)
CIA Examination – August 2016
M.Sc., (CHEMISTRY) – THIRD SEMESTR
Paper: Material Chemistry – CHDE 9316

Duration: 1 hour

Max marks: 20

Answer any TWO of the following

(2 x 2 = 4)

1. Give any four structural features of LDH materials.
2. What are MOFs? Give any two examples.
3. Write the general chemical composition formula and any two applications of zeolites.

Answer any TWO of the following

(2 X 6 = 12)

4. (a) "Materials science is interdisciplinary in nature". Explain the statement.
(b) Taking a microporous material as an example, describe the structure of a super cage unit.
5. (a) Give details of a method for the synthesis MCM – 41
(b) With a schematic diagram describe the structure of "Moly" (MoS_2) monolayer.
6. Taking a suitable example explain in detail a systematic method of synthesis of a material by precipitation method

Answer any ONE of the following

(4 marks)

7. "Clay materials are suitable as catalysts in petrochemical industries and organic synthesis"
Explain with suitable examples.
8. Calculate the number of terminal groups in a 3G Dendrimer, of your choice.