

Question bank Industrial

Q1) Correct the underline words and give the reasons.

- 1- Sand classified to group 2 according to **Bête's** classification
- 2- According to U.S Building industry, gravel size is more than 64 mm
- 3- Sand and gravel aggregate which used for concrete must contain 10% of fine grains and have smooth surface
- 4- The Romans made concrete by mixing basalt and limestone rock
- 5- Mechanical gypsum produced by heating gypsum ore which contain 25-30% of clay, sand and limestone less than 10%
- 6- The thermal conductivity of pumice is low, about 5
- 7- soda ash (Na₂SO₄) formed by combination of Gypsum and Halite, used in making caustic soda (NaHCO₃)
- 8- P₂O₅ in cement raw material must be 4%
- 9- Diatomite sink in water
- 10- Barite is used in deep drilling for oil and gas because it's hardness 2.3-3.5

Q2) Complete the following Sentences :-

- 1- Raw materials of cement are -----
- 2- Barium hydroxide is utilized to-----
- 3- Industrial rocks and minerals are-----
- 4- Disadvantages of Genetic classification are-----
- 5- According to British Institute of geological Science sand and gravel classified as economic deposit if -----
- 6- Deleterious materials with sand and gravel are -----
- 7- The Uses of light weight Aggregate are----- 8- Factors controlling building stone and quarry-----
- 9- Gypsum products are-----
- 10- Granite when immersed in water did not become ----- because-----

Q3) A- Discuss the basic steps of ore deposits extraction?

B- List the uses of light weight aggregate?

Q4) A- Compare between Underground or (rooms and pillars) mining method and

Surface or open-pit mining method? (15 Marks)

B- Classified nonmetallic materials according to Jensen and Bateman, 1981?

Q5) A- list the procedures may be followed to reduce or prevent the concrete cancer?

B- List the uses of lime?

Q6) Answer **three** of the following:-

- 1- List the general features of the nonmetallic materials.
- 2- The most impurities occurs in raw materials of cement
- 3- The characteristic features of Lightweight Aggregate
- 4- The characteristics features of Diatomite

Q7) List the uses of **three** of the following:-

- 1- Rock salt
- 2- Barite
- 3- Sand and gravels
- 4- Lime

Q8) Chose the correct answer or answers for the following :-

- 1- The desirable properties of bricks and tiles are
 - A- High water contain
 - B- Sulphaite more than 7%
 - C- Less than 20% calcium carbonate
 - D- Sulphaite more less than 5%
- 2- According to the British Institute of geological Science sand and gravel are classified as an economic deposit if
 - A- The thickness of the deposit is not less than 1 m.
 - B-The ratio between the thickness of overburden cover to the thickness is not less than 1/2 C-
 - C- Fine materials less than 5%
- 3- The procedures may be followed to reduce or prevent the concrete cancer **are**
 - A- To specify cement with an alkali content of 0.6 per cent or more
 - B- Using dolomite aggregate as alternative for ordinary pebble
 - C- Using limestone aggregate as alternative for ordinary pebble

D- To specify cement with an alkali content of 0.6 per cent or less

- 4- Mechanical gypsum produced by heating gypsum ore which contains
A-30- 45% of clay, B-Sand, and limestone more than 15%
C- 30-40% Clay D- Sand, and limestone less than 15%
- 5- Pyrex glass mixture are
A- 80% SiO₂, B-12% B₂O₃, C-7% Al₂O₃+ Na₂O) D- 5% K₂O

Q9) Give reasons for the following:-

- 1- Sand and gravel are important sources of natural aggregate
- 2- The flaky grains are not suitable in sand and gravel aggregate used for concrete
- 3- The limestone are added in the smelting and refining of iron and other metals
- 4- Gypsum used as a building material

Q10) complete the following sentences :-

- 1- According to British Institute of geological Science sand and gravel classified as economic deposit if-----
- 2- Factors controlling building stone and quarry are-----
- 3- industrial rocks and minerals are-----
- 4- The desirable properties bricks materials are -----
- 5- The percentage of fine materials of sand and gravel aggregate for concrete must be less than 5% because -----
- 6- *Vetrification is*-----
- 7- The refractories chemically divided to-----
- 8- The uses of NEPHELINE SYENITE are-----
- 9- The fragments pumice larger ----- millimeters, and those from this size -----
- are termed pumicite
- 10- Perlite have perlitic structure produced as a result of-----