

B.Sc. (I.C.) Sem. II

: નોંધ :

23 OCT 2020

Sub-code. 20615

૧. દરેક પ્રશ્નનો [a] અથવા [a(i)] અને [a(ii)] જ લખવાના રહેશે.

૨. પ્રશ્ન : વ[a] અથવા વ[a(i)] અને વ[a(ii)] તથા ર[a] અથવા ર[a(i)] અને ર[a(ii)] ના 14 માર્ક્સ ના બદલે ૧૮ માર્ક્સ રહેશે.

૩. પ્રશ્ન : ઝ[a] અથવા ઝ[a(i)] અને ઝ[a(ii)] તથા જ[a] અથવા જ[a(i)] અને જ[a(ii)] ના 14 માર્ક્સ ના બદલે ૧૭ માર્ક્સ રહેશે.

૪. દરેક પ્રશ્નનો પ્રશ્ન નં વ(b), પ્રશ્ન નં ર(b), પ્રશ્ન નં ૩(b) તથા પ્રશ્ન નં જ(b) (ટૂંકા પ્રશ્નો) વિદ્યાર્થીએ લખવાના નથી.

- Que.1 (A) What is fuel? Classify fuel in detail with example. [14]
- OR
- Que.1 (A-I) What are colloids? Explain it. [07]
- (A-II) Write a short note on Bredig's Arc method. [07]
- Que.1 (B) Give the answer of following question. (Any four) [04]
- (1) The disperse particles ranges from \_\_\_\_\_ to \_\_\_\_\_ .
- (2) Which is intermediate between true solution and suspension?
- (3) In foam, dispersion medium is in which state?
- (4) Hair cream is which type of colloidal solution?
- (5) Which sols may be prepared by simply warming the solid with liquid dispersion medium?
- (6) In aerosol, dispersed phase is in which state?
- Que.2 (A) What is coal? How it formed? Classify coal in detail. [14]
- OR
- Que.2 (A-I) Write a note on gravity separation. [07]
- (A-II) What is calcination? Explain it with example. [07]
- Que.2 (B) Give the answer of following question. (Any four) [04]
- (1) What is metallurgy?
- (2) A mineral from which metal can be extracted economically is known as \_\_\_\_\_.
- (3) In which process the size of the ore is reduced?
- (4) Give molecular formula of tin stone.
- (5) Which process is used for extraction of PbS?
- (6) Which process is used for separation of  $Cr_2O_3$ ?
- Que.3 (A) How chromium can be extracted from chromite? Give physico chemical rule. [14]
- OR
- Que.3 (A-I) State and explain uses and properties of chromium. [07]
- (A-II) Discuss the method of extraction of copper from non-sulfide ores. [07]

- Que.3 (B) Give the answer of following question. (Any three) [03]
- (1) Which word is derived from the Greek word chroma?
  - (2) Give molecular formula of chrome.
  - (3) Which method gives 100% pure copper?
  - (4) Give atomic number of zinc.
  - (5) Give molecular formula of crocosite.
- Que.4 (A) Discuss various precipitation methods for sterilization of water. [14]
- OR
- Que.4 (A-I) How silica was removed from water? Explain it. [07]
- (A-II) Write a note on lime-soda process for softening of water. [07]
- Que.4 (B) Give the answer of following question. (Any three) [03]
- (1) Which salts are present in hard water?
  - (2) Which units used in expressing water analysis?
  - (3) Bubbling compressed air removes \_\_\_\_\_ of raw water.
  - (4) Which component is used for settle down suspended impurities of water?
  - (5) The well water is sterilized by adding \_\_\_\_\_.