

(6 pages)

Reg. No. : .....

**Code No. : 30093 E    Sub. Code : GMCH 6 B**

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Chemistry – Main

Major Elective — APPLIED CHEMISTRY

(For those who joined in July 2012 – 2015 only)

Time : Three hours

Maximum : 75 marks

PART A — ( $10 \times 1 = 10$  marks)

Answer ALL questions.

Choose the correct answer :

1. Hardness of water is due to the presence of salts of
  - (a) Potassium
  - (b) Chlorine
  - (c) Magnesium
  - (d) Boron
2. The pH of the drinking water is about \_\_\_\_\_.
  - (a) 6.5 – 8.5
  - (b) 5.5 – 6.5
  - (c) 4.5 – 5.5
  - (d) 3.5 – 4.5

3. A high temperature lubricants used many undergoes  
(a) vulcanization (b) volatilization  
(c) lubrication (d) combustion
4. Pensky – Marten's apparatus is used to find out the \_\_\_\_\_.  
(a) cloud point (b) pour point  
(c) flash point (d) fire point
5. Which one of the following does not contain silver?  
(a) Horn silver (b) Ruby silver  
(c) German silver (d) Lunar caustic
6. An alloy is a \_\_\_\_\_.  
(a) Pure metal  
(b) Mixture of metals in any proportion  
(c) Mixture of metal in fixed proportion  
(d) Mixture of two-non-metals
7. What is the raw material in the leather industry?  
(a) By-products of the food industry  
(b) By-products of the metal industry  
(c) By-products of the fishing industry  
(d) By-products of computer industry

8. Factors leading to the world shortage of leather is
- (a) Population explosion
  - (b) Decrease in world wide tannns
  - (c) High demand for cheaper food source
  - (d) All the above
9. Waste water released from \_\_\_\_\_ are not the sources of bacteria.
- (a) Sanitaria                      (b) Municipalites
  - (c) Tanning                      (d) Industries
10. Which one of the following is the main cause of air pollution?
- (a) Decrease in the factories
  - (b) Increase in the factories
  - (c) Increase in the sea water level
  - (d) Increase in the modern technologies

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write a short notes on Permutit's Process.

Or

- (b) Explain in brief about electrodialysis.

12. (a) Give a short note on mechanism of lubrication.

Or

- (b) Define Greases. Classify it with a suitable examples.

13. (a) Write a short note on Indian iron resources.

Or

- (b) Give the applications involved in powder metallurgy.

14. (a) Give a brief note on leather industries in India.

Or

- (b) Describe a brief note on waste management from leather industry.

15. (a) Write a short note on green house effect.

Or

- (b) Explain in brief about the composition of atmosphere.

PART C — ( $5 \times 8 = 40$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain in detail about the various methods of internal conditioning of boiler feed water.

Or

- (b) Describe the reverse osmosis method of desalination of  $H_2O$ .

17. (a) Explain in detail about the dropping point and its determination.

Or

- (b) Give a detailed classification involved in lubricating oils.

18. (a) Explain in detail about the determination of ferrous iron and total iron by dichrometry method.

Or

- (b) Describe the fabrication method involved in powder metallurgy.

19. (a) Explain in detail about the leather tanning and its processes.

Or

- (b) Discuss any five leather products and its uses.

20. (a) Describe in detail about the sources, causes and control of soil pollution.

Or

- (b) Explain the following :

- (i) Acid rain
  - (ii) Ozone depletion.
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