

B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

Fifth Semester

Chemistry

Major Elective — APPLIED CHEMISTRY

(For those who joined in July 2021-2022)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer:

- Knocking can be prevented by adding \_\_\_\_\_ to petrol.  
(a) lead (b) ethanol  
(c)  $Pb(C_2H_5)_4$  (d) propane
- \_\_\_\_\_ has good resistant to knocking and orbitarily given the value of 100.  
(a) Iso octane (b) n-heptane  
(c) Pentane (d) Iso butane

- Glycerol is added to soap because it  
(a) is a filler  
(b) to increase leathering  
(c) presents rapid drying  
(d) to make soap granuls
- An example of non ionic detergent is  
(a) Polyethylene glycol stearate  
(b) Sodium Lauryl Sulphate  
(c) Sodium P-n- dodecyl Benzene sulphonate  
(d) Cetyl trimethyl ammonium chloride
- Which explosives are used for primarily mines and demolition explosive?  
(a) TNT  
(b) Urea nitrate  
(c) HMTD  
(d) TATP
- Which are mentioned below is one of the commercial explosives?  
(a) HMTD (b) Dynamite  
(c) RDX (d) C4

- These are added to paint to reduce cracking.  
(a) Fillers (b) Thinners  
(c) Plasticizens (d) Pigments
- \_\_\_\_\_ are used as antiskin agent in paints.  
(a) Triphenyl phosphase  
(b) Gypsum  
(c) Silica  
(d) Poly hydroxy phenol
- 46%  $N_2$  is present in \_\_\_\_\_.  
(a) Urea  
(b) Ammonium Nitrate  
(c) Ammonium Sulphate  
(d) NPK fertilizer
- Which among the following is a phosphatic fertilizer?  
(a) Ammonium Sulphate  
(b) Calcium Cyanide  
(c) Super Phosphate  
(d) Urea

PART B — (5 × 5 = 25 marks)

Answer ALL questions either by choosing (a) or (b).  
Each answer should not exceed 250 words.

- (a) What are the disadvantages of solid and liquid fuels?  
Or  
(b) Write a note on high and low temperature carbonization.
- (a) What are the primary constituent of paint?  
Or  
(b) Write note on addition for lubricating oil.
- (a) What are contact pesticides give example?  
Or  
(b) Write a note on NPK fertilizer.
- (a) Explain the process of manufacture of soap.  
Or  
(b) Give the types of soap and their specific uses.
- (a) Give the composition of match head.  
Or  
(b) Write a note on setting of cement.



PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain any two gaseous fuel you have studied.

Or

- (b) Write a note on  
(i) Thermal Cracking  
(ii) Catalytic cracking.

17. (a) Write a note on Lubricants.

Or

- (b) Write the preparation and classification of adhesives.

18. (a) Write about two phosphatic fertilizers you have studied.

Or

- (b) Write a note on  
(i) Bordeaux Mixture  
(ii) Lime Sulphur

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19. (a) Explain the classification of Detergents with examples.

Or

- (b) Write a note on  
(i) Surface active agents  
(ii) Cleaning action of Detergents.

20. (a) Write a note on refractory material.

Or

- (b) Explain the manufacture of safety matches.

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