

(8 pages)

Reg. No. :

Code No. : 20381 E Sub. Code : EECH 5 A

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2025.

Fifth Semester

Chemistry

Elective — INDUSTRIAL CHEMISTRY

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Gobar gas is a type of
- (a) synthetic gas
 - (b) water gas
 - (c) producer gas
 - (d) bio gas

2. Which one of the following measures a fuels resistance to knocking?
- (a) cetane number
 - (b) octane number
 - (c) combustion engine
 - (d) unseaded petrol
3. Toilet soap is made from a
- (a) Base of oils
 - (b) Base of oils and an alkali
 - (c) Base of alkali
 - (d) Base of metal halides
4. Soaps are biodegradable because
- (a) Straight chain hydrocarbon molecules can be broken down by microorganisms
 - (b) Automatic hydrocarbon molecules can be broken down by chemicals
 - (c) Straight chain hydrocarbon molecules can be broken down by chemicals
 - (d) All the above

5. The full form of Agmark is
- (a) Agriculture Making
 - (b) Agriculture Movement
 - (c) Agriculture Model
 - (d) Agriculture Marketing
6. Which one of the following artificial agent is added to make fruits flavour in the food?
- (a) Ethyl vanillin
 - (b) Diacetyl
 - (c) Esters
 - (d) Vanillin
7. Quartz is composed of
- (a) SiO_2
 - (b) TiO_2
 - (c) Al_2O_3
 - (d) Aluminum silicate
8. This is a final finishing process in paper industry
- (a) Beating
 - (b) Refining
 - (c) Filling
 - (d) Calendering

9. An invention must be new and not have been previously disclosed to the public in any form is known as
- (a) Non obviousness
 - (b) Novelty
 - (c) Patents
 - (d) IPR
10. RCC is a combination of
- (a) Steel and sand
 - (b) Cement and steel
 - (c) Cement and lime
 - (d) Concrete and steel

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain : Determination of calorific value.
- Or
- (b) Write a note on rocket fuels.

12. (a) Discuss on moisturising and cleansing.

Or

(b) Write a note on Muskone and Coumarin.

13. (a) Discuss on food preservatives.

Or

(b) How the food standards are important?

14. (a) Write the composition and uses of carborundum and aluminum carbide.

Or

(b) Discuss the structure and composition of skin.

15. (a) Define lubricants and write its classification.

Or

(b) Write a note on clarification marks and logos.

Page 5 Code No. : 20381 E

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain :

(i) Classification of coal. (6)

(ii) Define : cetane number. (2)

Or

(b) (i) Write a note on knocking in internal combustion engines. (6)

(ii) Define : Antiknock agents. (2)

17. (a) (i) Discuss on all purpose shaving cream. (5)

(ii) Write a note on makeup preparations. (3)

Or

(b) How will you manufacture the soap and write its ingredients?

Page 6 Code No. : 20381 E

18. (a) Explain :
(i) Food flavours
(ii) Food colours.

Or

- (b) Explain :
(i) Anti oxidants
(ii) Sweetening agent.

19. (a) Explain : Composition and uses of boron nitride and boron carbide.

Or

- (b) Discuss on pre tanning process of leather.
(i) curing
(ii) liming
(iii) beating
(iv) picking.

20. (a) Define the following :
(i) Viscosity index
(ii) Flash point
(iii) Cloud point
(iv) Pour point.

Or

- (b) Write a note on the following :

- (i) Setting time
(ii) Decay of concrete
(iii) Mortar
(iv) RCC.
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