

(6 Pages)

Reg. No. :

Code No. : 30290 E Sub. Code : SACH 21/
AACH 21

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2022

Second/Fourth Semester

Chemistry — Allied

ALLIED CHEMISTRY — II

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. How many benzene rings are in anthracene?

- (a) 2 (b) 3
(c) 4 (d) 1

2. Anthracene + $H_2/Ni \rightarrow ?$

- (a) declain
(b) tetralin
(c) 9, 10 dihydroanthracene
(d) perhydro anthracene

3. Uranium isotope used in nuclear reactor

- (a) U^{235} (b) U^{238}
(c) U^{236} (d) U^{237}

4. The method used to separate isotope is

- (a) diffision number (b) oxmosis
(c) oxidation method (d) none of these

5. Deoxy ribose is a _____

- (a) pentose sugar (b) hexose sugar
(c) heptose sugar (d) none of these

6. Which one base is not in RNA?

- (a) adenine (b) thymine
(c) uracil (d) cytosine

7. The chemical used to slowdown the setting of cement is _____

- (a) Lime (b) Gypsum
(c) Clay (d) Sand

Page 2 Code No. : 30290 E



8. The main constituent of gobar gas is
 (a) Methane (b) Propane
 (c) Butane (d) None of these
9. Aspirin is _____
 (a) Phenyl salicylate (b) Ethylsalicylate
 (c) Methyl salicylate (d) Acetyl salicylic acid
10. Which is used to cure jaundice?
 (a) Neem (b) Keezhanelli
 (c) Thulsi (d) None of these

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain aromaticity and Huckel's rule.

Or

- (b) (i) Naphthalene + $H_2/Ni \rightarrow$
 (ii) Naphthalene + air/ $V_2O_5 \rightarrow$
 (iii) Anthracene + $K_2Cr_2O_7/H_2SO_4 \rightarrow$

Page 3 Code No. : 30290 E

12. (a) Distinguish between nuclear fission and nuclear fusion.

Or

- (b) What are radio isotopes? How are they used in medicinal fields?

13. (a) What is meant by isoelectric point? Explain with suitable example.

Or

- (b) What are artificial sweeteners? Explain with example.

14. (a) How is Portland cement prepared?

Or

- (b) Explain the role of nitrogen in plant growth.

15. (a) Explain the cause of diabetes. Give two examples of hypoglycemic drugs.

Or

- (b) Write a note on medicinal plants.

Page 4 Code No. : 30290 E

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PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain the structure of benzene.

Or

- (b) Write the chemical reactions of anthracene.

17. (a) Write a note on :

- (i) n/p ratio
- (ii) Binding energy.

Or

- (b) Explain group displacement law and radio active series.

18. (a) What are carbohydrates? Explain its classification with example.

Or

- (b) Distinguish between DNA and RNA. Explain the types of RNA.

19. (a) Explain the manufacture of Soap by Mill's process.

Or

- (b) Discuss the manufacture of glass.

20. (a) What are antibiotics? Explain its classification with examples.

Or

- (b) Write a note on :

- (i) Analgesic
- (ii) Sulpha drugs
- (iii) Antimalarials.

