

19/06/23  
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Reg. No. : .....

Code No. : 10013 E

Sub. Code : SACH 21/  
AACH 21

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

Second/Fourth Semester

Chemistry — Allied

ALLIED CHEMISTRY — II

(For those who joined in July 2017–2020)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is a characteristic of an aromatic compound?
- (a) cyclic
  - (b) planar
  - (c)  $(4n+2)\pi$  electrons
  - (d) all the above

2. Which of the following is formed when benzene is oxidised by  $V_2O_5$  in presence of air?
- (a) Benzoic anhydride
  - (b) Benzaldehyde
  - (c) Maleic anhydride
  - (d) Benzoic acid
3. Which isotope below has the highest binding energy?
- (a)  $^4\text{He}$
  - (b)  $^{16}\text{O}$
  - (c)  $^{32}\text{S}$
  - (d)  $^{55}\text{Mn}$
4. Which of the following element used for dating the ancient remains is?
- (a) C - 14
  - (b) Ni
  - (c) C - 12
  - (d) Rd
5. Nucleoside contains
- (a) Base - phosphate
  - (b) Base - sugar
  - (c) Base sugar - phosphate
  - (d) Sugar - phosphate



6. Which of the following is a reducing sugar?
- (a) Dihydroxy acetone
  - (b) Erythrulose
  - (c) Glucose
  - (d) All the above
7. Urea is a \_\_\_\_\_ fertilizer.
- (a) Nitrogen            (b) Potash
  - (c) Phosphatic        (d) None of these
8. Producer gas is a mixture of
- (a) Water and air    (b) CO and CO<sub>2</sub>
  - (c) CO and H<sub>2</sub>        (d) CO and N<sub>2</sub>
9. Deficiency of insulin causes
- (a) scurvy                (b) diabetes
  - (c) beri - beri        (d) hepatitis - B
10. Dysentery is \_\_\_\_\_ disease.
- (a) infectirus        (b) herebtitary
  - (c) deficiency        (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 the oxidation reaction in benzene.
- Or
- (b) Discuss the preparation of anthracene.
12. (a) Write short notes on mass defect.
- Or
- (b) Write the difference between nuclear fission and nuclear fusion.
13. (a) Write a note on artificial sweetners.
- Or
- (b) Write any three colour reactions of proteins.
14. (a) Explain the role of mineral elements in plant growth.
- Or
- (b) Write a note on photochromic glass.

15. (a) Explain the Water - borne diseases.

Or

(b) Write note on :

(i) Analgesics

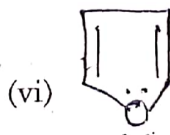
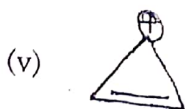
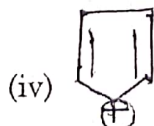
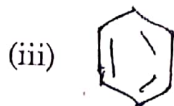
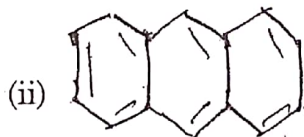
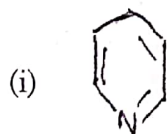
(ii) Sulpha drugs.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Which of the following compounds will show aromaticity? Give reasons.



Or

(b) Discuss the chemical reactions of Naphthalene.

17. (a) Write a notes on :

(i) Isobars

(ii) Isotones

(iii) Separation of isotopes.

Or

(b) Explain nuclear fission and its applications.

18. (a) Explain the classification of aminoacids.

Or

(b) What are nucleic acid? Give the components of DNA.

19. (a) How are the following prepared?

(i) Ammonium sulphate

(ii) Superphosphate of lime

(iii) Mixed fertilizers.

Or

(b) Explain the classification of detergents and uses.

20. (a) What is diabetes? Explain briefly the types of diabetes and their treatment.

Or

(b) Write a note on :

(i) Antimalarials

(ii) Antibiotics.

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