

**PART C — (5 × 8 = 40 marks)**

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

Each answer should not exceed 600 words.

16. (a) Explain briefly the structure of benzene.  
Or  
(b) Write down the non-benzenoid compounds with suitable examples.
17. (a) What are isotopes? How are they separated by diffusion method?  
Or  
(b) Explain briefly the application of isotopes in medicinal field.
18. (a) What are proteins? How are they classified based on their composition and shape?  
Or  
(b) Explain the following :  
(i) Nucleic acids (3)  
(ii) Nucleotides (2½)  
(iii) Nucleosides. (2½)
19. (a) What are soaps? Explain their cleansing action.  
Or  
(b) Explain the producer gas, gobar gas and LPG.
20. (a) Explain any two examples for air-borne and water-borne diseases for each type.  
Or  
(b) What is meant by diabetes? How is it caused? Explain briefly.

**Reg. No. : .....**

**Code No. : 41372 E Sub. Code : SACH 21**

**B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.**

**Fourth Semester**

**Chemistry — Allied — II**

**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. The molecular formula of anthracene is  
(a)  $C_6H_{10}$  (b)  $C_{14}H_{10}$   
(c)  $C_{14}H_{14}$  (d)  $C_{10}H_{10}$
2. All aromatic compounds have  
(a) sweet smell  
(b) delocalised  $\pi$ -bonds  
(c) planar structure  
(d) all the above



3. A radioactive element emits  $\alpha$ -particle. The new element has the atomic number comparing to the parent radio isotope element is  
 (a) lesser than four (b) greater than four  
 (c) greater than two (d) lesser than two
4. Which of the following isotope is used to determine the age of the fossils?  
 (a)  $^{14}\text{N}$  (b)  $^{12}\text{C}$   
 (c)  $^{14}\text{C}$  (d)  $^{15}\text{N}$
5. \_\_\_\_\_ is used to detect aminoacids.  
 (a) Methylene blue (b) Phenolphthalein  
 (c) Ninhydrin (d) Methyl orange
6. Which of the following base is not present in DNA?  
 (a) Adenine (b) Guanine  
 (c) Uracil (d) Thymine
7. The water gas contains  
 (a)  $\text{H}_2\text{O}$  and  $\text{N}_2$  (b)  $\text{CO} + \text{H}_2$   
 (c)  $\text{O}_2 + \text{H}_2\text{O}$  (d)  $\text{CO} + \text{N}_2$
8. The sodium salt of fatty acid is  
 (a) soft soap (b) hard soap  
 (c) both (a) and (b) (d) detergent
9. Paracetamol is an example for  
 (a) Analgesics (b) Antipyretics  
 (c) Both (a) and (b) (d) Antibiotics
10. Kezhanelli is used to cure  
 (a) fever (b) diabetes  
 (c) jaundice (d) malaria

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### PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write down any five characteristics of aromatic compounds.  
 Or  
 (b) How is naphthalene prepared? Write down its any two chemical properties.
12. (a) Write down the differences between nuclear fission and nuclear fusion.  
 Or  
 (b) State and explain the Soddy's Group displacement law.
13. (a) What are carbohydrates? What are its types? Give example for each type.  
 Or  
 (b) What are the differences between DNA and RNA?
14. (a) Write a note on NPK mixed fertilizers.  
 Or  
 (b) How is glass manufactured?
15. (a) What is meant by antibiotics and antipyretics? Explain with examples.  
 Or  
 (b) Give the importance of Tulsi.

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