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Reg. No. : .....

Code No. : 40289 E

Sub. Code : JACH 21

B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

Second Semester

Chemistry — Allied

ALLIED CHEMISTRY — II

(For those who joined in July 2016 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

- Which of the following is not an aromatic compound?
  - Benzene
  - Cyclohexane
  - Naphthalene
  - Aniline
- Huckel rule is
  - $(4n + 2)$  rule
  - $(4n - 2)$  rule
  - $n(n + 1)$  rule
  - $\sqrt{n(n + 1)}$  rule

3. Which of the following are isotopes?
- (a)  $^{12}\text{C}$  and  $^{13}\text{C}$       (b)  $^{16}\text{O}$  and  $^{18}\text{O}$   
(c)  $^{14}\text{N}$  and  $^{15}\text{N}$       (d) All the above
4. The method used to separate the isotopes is
- (a) Diffusion method  
(b) Osmosis  
(c) Oxidation method  
(d) None of the above
5. The essential amino acid of the following is                     .
- (a) Alanine      (b) Glycin  
(c) Tyrosine      (d) Tryptophan
6. The non-starch polysaccharides are
- (a) Cellulose and hemicellulose  
(b) Amylose and amylopectin  
(c) Glucose and galactose  
(d) Sucrose and lactose
7. Soap reacts with hard water to form
- (a) Calcium salts      (b) Barium salts  
(c) Sodium salts      (d) Iron salts

8. The reason for adding carboxymethyl cellulose to the washing material is
- (a) for the purpose of drying the washing material
  - (b) removing the dirt fibre
  - (c) it deposits the impurities float on water
  - (d) all the above
9. Chloramphenicol is
- (a) an antiseptic
  - (b) an antibiotic
  - (c) antipyretic drug
  - (d) anti malarial drug
10. The neem bark is used for
- (a) malaria
  - (b) prevents cold
  - (c) liver ailments
  - (d) none of the above

PART B — (5 × 5 = 25 marks)

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

Answer should not exceed 250 words.

11. (a) What are aromatic compounds? Write down any four general properties of them.

Or

- (b) How are decalin,  $\alpha$ -acetylnaphthalene and  $\alpha$ -nitronaphthalene prepared from naphthalene?

12. (a) Write a note on nuclear stability.

Or

(b) What are isobars and isotones? Explain them with suitable examples.

13. (a) Discuss briefly the artificial sweeteners with suitable examples.

Or

(b) How are proteins classified based on their composition?

14. (a) Explain briefly the cleansing action of soaps and detergents.

Or

(b) How is glass manufactured?

15. (a) What are analgesics? Name any two analgesics and explain them briefly.

Or

(b) Write a note on diabetes.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) How are the following obtained from benzene?
- (i) Nitrobenzene
  - (ii) Toluene
  - (iii) Benzene hexachloride
  - (iv) Acetophenone .

Or

- (b) How is benzene prepared? Explain briefly its structure.
17. (a) What are radioactive series? Explain any two radioactive series.

Or

- (b) Explain briefly the applications of radioactive isotopes.
18. (a) How are carbohydrates classified? Explain them with suitable examples.

Or

- (b) What is DNA? Explain its structure.

19. (a) What are gaseous fuel? Discuss briefly the natural gas, producer gas and LPG.

Or

- (b) What are the raw materials of cement? How is cement manufactured?

20. (a) What are infective and hereditary diseases? Mention two examples for each type and explain them.

Or

- (b) Name any three Indian medical plants and explain their importance.
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