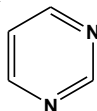
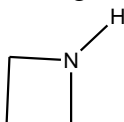


M. Sc. SEM. IV
Paper III
Natural Products and Heterocyclic Chemistry II
Sample questions

1. Name the following heterocyclic compound by replacement nomenclature.



- a. 1, 3- Dizabenzene
 - b. Pyrimidine
 - c. 1, 3-azobenzene
 - d. 1, 3-dipyridine
2. Give Hantzsch Widman name of following compound.



- a. cycloazetidine
 - b. Azate
 - c. Azetidine
 - d. Azete
3. When benzene is fused with pyrrole to form..... fused compound.
- a. Pyro benzene
 - b. Indole
 - c. Iso indole
 - d. Aza-quoline
4. Heterocyclic compound are in nature.
- a. Acidic
 - b. Basic
 - c. Phenolic
 - d. Neutral
5. When 1, 4 di carbonyl compound is heated with ammonia, a primary amines, etc enol form gets cyclized to giveor its derivatives.
- a. Pyrrolidine
 - b. Pyrrole
 - c. Iso pyrrole
 - d. Pyrazine
6. Two moles of 1,3-diketone is heated with one mole each of an aldehyde and ammonia to give pyridine derivatives is called..... synthesis.
- a. Hantzsch synthesis
 - b. Paal- Knorr Synthesis
 - c. Woodward-Hoffmann
 - d. Paterno- Buchi reaction

7. In nomenclature of heterocyclic compound prefix Tellura used for which element?

- a. Lead
- b. Tin
- c. Antimony
- d. Selenium

8. Complete the following reaction



- a. $\text{CH}_3\text{CH}_2\text{OH}$
- b. $\text{CH}_3\text{CH}_2\text{CHO}$
- c. CH_3CHO
- d. CH_3OH

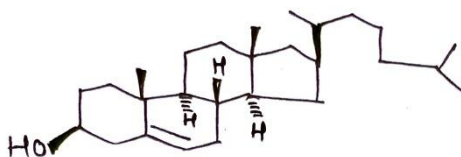
9. The smallest unsaturated nitrogen heterocycle is.....

- a. Azetidine
- b. Azirine
- c. Vinyl nitrene
- d. Vinyl nitrane

10. Paterno- Buchi reaction is a photochemicalcycloaddition of carbonyl compounds

- a. Oxetane
- b. Oxetene
- c. Oxirane
- d. Oxirene

11. What is the name of the following compound?



- a. Cholesterol
- b. Oestriol
- c. Cortisol
- d. Pregnanediol

12. Which of the following regulates the female reproductive system?

- a. Progesterone
- b. Testosterone
- c. Estrogens
- d. Androsterone

13. Bile acid stored in _____.

- a. Pancreas
- b. Duodenum
- c. Gall bladder
- d. Cystic duet

14. Which of these hormones is secreted in the liver?
- Renin
 - Somatomedin
 - Erythropoietin
 - Estrogen
15. Which of the following is NOT an example of steroidal Alkaloids?
- Conessine
 - Veratramine
 - Solanidine
 - Diogenine
16. _____ is Vitamin D2 used to treat hypoparathyroidism.
- Cholesterols
 - Coprosterols
 - Calciferols
 - Ergasterols
17. Progesterone made from the_____, which found in soybean oil.
- Stigmasterols
 - Mycosterols
 - Oestrone
 - Oestradiol
18. Adrenaline is_____
- Produced by the adrenal cortex
 - Also called epinephrine
 - Released when the parasympathetic nervous system is stimulated
 - To reduce hyperglycemia
19. Which is the first intermediate in cholesterol synthesis?
- Mevalonate
 - Isoprene
 - Squalene
 - Ethylene

20. _____ is found in the alcohol portion of pyrethrins.
- a. Jasmolone
 - b. Cinerolone
 - c. Allethrolone
 - d. Muscone
21. Which of the following element is required for the synthesis of thyroid hormone?
- a. Iron
 - b. Iodine
 - c. Zinc
 - d. Copper
22. The stimulus for producing insulin is_____.
- a. Low blood glucose concentration
 - b. High blood glycogen concentration
 - c. Low blood amino acid concentration
 - d. High blood glucose concentration
23. Water soluble hormones exhibit the shortest_____.
- a. Half life
 - b. Activation time
 - c. Molecule
 - d. Chain of amino acids
24. Sympathetic nerve stimuli are responsible for the_____.
- a. Insulin
 - b. Epinephrine
 - c. Estrogen
 - d. Aldosterone
25. The transcription of new messenger RNA is a function of_____.
- a. Steroid hormone
 - b. Catecholamines
 - c. Pituitary gland
 - d. Pancreatic hormones

26. Which of the following is NOT a water soluble Vitamin?

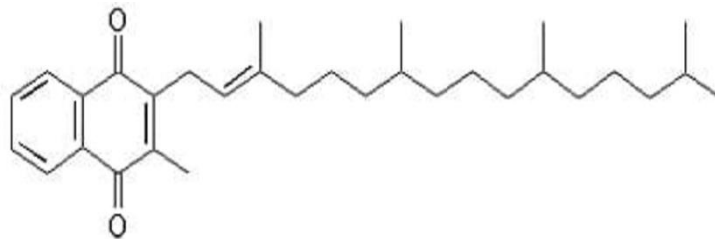
- a. Vitamin B1
- b. Vitamin C
- c. Vitamin B2
- d. Vitamin A

27. Which of the following Vitamin deficiency causes Scurvy?

- a. Thiamine
- b. Riboflavin
- c. Ascorbic acid
- d. Calciferol

28. _____ Vitamin helps in blood clotting.

- a. Retinol
- b. Ascorbic acid
- c. Pantothenic acid
- d. Phylloquinone



29. What is the name of the following compound?

- a. Vitamin K1
- b. Vitamin B12
- c. Folic acid
- d. Penicillin G

30. The coenzyme RMN in Vitamin B2 synthesis is stand for

- a. Riboflavin micronucleotide
- b. Riboflavin mononucleotide
- c. Riboflavin macronucleotide
- d. Riboflavin mesonucleotide

31. The penicillin's on acid hydrolysis with hot diluted acid, gives
- Desthiobenzyl penicilloic acid
 - D-penicillamine, Penilloaldehyde
 - L-penicillamine, Penilloaldehyde
 - Penillo ketone, Acetaldehydes
32. Gram positive bacteria have a thin _____ layer.
- Lactoflavin
 - Monoterpenoid
 - Cytoplasmic lipid
 - Beta-lactam ring
33. As Vitamin B₁ is anti-neuritic factor, it also known as _____
- Pantothenic acid
 - Aneurin
 - Adermin
 - Folic acid
34. _____ essential for proper development of blood cell.
- Cyanocobalamin
 - Calciferol
 - Alpha-tocopherol
 - Menaquinone
35. Vitamin E synthesized by the condensation of _____.
- Naphthalene and phytol
 - 5-ethoxy-4-methyl oxazole and diethyl ether
 - Trimethyl quinol and phytyl bromide
 - t-butyl phthalimide and D-penicillamine
36. Which of the following is NOT a function of Vitamin A?
- Detection of light in air
 - Synthesis of the blood clotting proteins
 - Activation of Calciferol receptors
 - Regulation of gene expression

37. The penicillin's act by:
- Inhibition of protein synthesis
 - Interfering with bacterial cell wall synthesis
 - Inhibition of neuclic acid synthesis
 - Phagocytic action
38. _____ is the most abundant molecule in oil of ginger comprising 30% or more of the essential oil.
- Cadinene
 - Humulones
 - Menthol
 - Zingiberene
39. Cephalosporin-C on NaHCO_3 treatment gives effervescence, indicates _____ group.
- COOH
 - OH
 - NH₂
 - COR
- 40 _____ are natural insecticides found in the plant families Leguminoceace and Fabaceae.
- Azadirachitin
 - Rotenone
 - Pyrethrin I
 - Pyrethrin II