



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN PHARMACEUTICAL TECHNOLOGY

APM 2204: PHARMACOGNOSY

SPECIAL/ SUPPLIMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2HOURS

DATE: Pick Date Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **THREE** Section(s). Attempt All questions in section A and B and any two questions in section C.

SECTION A

[Answer **ALL** questions]

1. Which of the following is not a characteristic for tannins?
 - A. They give precipitants on alkaloids
 - B. They give a yellow precipitate with ferric salt
 - C. They have astringenic properties
 - D. They transform the hide into leather
2. Polyhydroxy phenolic compounds
 - A. tannins
 - B. glycosides
 - C. resins
 - D. lipids
3. Cancer causing agents
 - A. surfactants
 - B. purgatives
 - C. carcinogens
 - D. cardiogenics
4. Which of the following is a not a class of tannins

- A. complex
 - B. hydrolysable
 - C. condensed
 - D. adulterated
5. Example of astringent
- A. hides
 - B. sugar
 - C. leather
 - D. soap
6. Which of the following is used to convert hide and skin into leather?
- A. glycosides
 - B. tannins
 - C. lipids
 - D. none of the above
7. Tannins have ability to precipitate solutions of all of the following except
- A. Heavy metals
 - B. Proteins
 - C. vitamins
 - D. Glycosides
8. Which of the following is not a use of mannitol.
- A. diagnostic reagent
 - B. diabetic food
 - C. crystallization of sucrose
 - D. diuretic
9. Polyols
- A. alcohols with polymerase
 - B. multiple alcohols
 - C. sugar alcohols
 - D. poly sorbitol
10. Sorbitol is also known as
- A. D-sucrose
 - B. B-fructose
 - C. B-glucitol
 - D. D-glucitol
11. Condensation of sugar phosphates and sugar nucleotides yields
- A. polyols
 - B. carbohydrates
 - C. polysaccharides
 - D. glucitol
12. Essential storage form of sugar
- A. cellulose
 - B. glycoside
 - C. starch
 - D. none of the above
13. Building material for plants
- A. cellulose
 - B. glycoside
 - C. starch
 - D. none of the above

14. Which of the following is not an application of starch in pharmacy?
- A. in dusting powders
 - B. in ointments
 - C. in disinfecting of theatres
 - D. as disintegrating agent
15. Non-reducing organic compounds yielding glycone and aglycone on hydrolysis
- A. carbohydrates
 - B. glycosides
 - C. tannins
 - D. resins
16. Which of the following is not a therapeutic class of glycosides.
- A. steroidal glycosides.
 - B. analgesic glycosides.
 - C. cardiac glycosides.
 - D. purgative glycosides.
17. Esters of fatty acids with glycerol.
- A. vitamins
 - B. glycosides
 - C. lipids
 - D. carbohydrates
18. The following are classes of fixed oils except
- A. drying
 - B. non-drying
 - C. semi-drying
 - D. semi-drying
19. Which of the following is not a property of lipids.
- A. odourless
 - B. non-irritant
 - C. volatile
 - D. tasteless
20. Which of the following is not an application for *cocos nucifera*.
- A. in eye preparations
 - B. in cosmetics
 - C. as ointment base
 - D. in confectioneries
21. Tend to be used as solvents for resins
- A. fixed oils
 - B. volatile oils
 - C. tannins
 - D. alkaloids
22. *Pinaceae*, *Labiatae*, *Rutaceae*, *Umbelliferae* and *Lauraceae* are families commercially useful for production of
- A. fixed oils
 - B. volatile oils
 - C. tannins
 - D. alkaloids
23. *Helianthus annuus* is the botanical name for
- A. sunflower
 - B. safflower
 - C. sesame
 - D. sweet almond

24. The following are possible sources of drugs except:
- A. plants
 - B. animals
 - C. minerals
 - D. compost
25. Used to determine glomerular filtration rate as well as a sweetening agent.
- A. insulin
 - B. inulin
 - C. dextran
 - D. dextrin
26. Used as blood plasma expander
- A. insulin
 - B. inulin
 - C. dextran
 - D. dextrin
27. Which of the following is not an exudate gum.
- A. acacia
 - B. tragacanth
 - C. stercula
 - D. algae
28. Which of the following is not an application of tragacanth
- A. purgative
 - B. thickening agent
 - C. suspending agent
 - D. tableting
29. Which of the following can be used in cough, diarrhea and throat preparations?
- A. acacia
 - B. tragacanth
 - C. stercula
 - D. algae
30. Counter irritant
- A. rubefacient
 - B. emollient
 - C. carcinogen
 - D. antidote
31. Which vitamin is a coenzyme required for oxidation of carbohydrates and ribose synthesis?
- A. riboflavin(B₂)
 - B. thiamine(B₁)
 - C. pantothenic acid(B₅)
 - D. cyanocobalamin(B₁₂)
32. Which one of these vitamins would be necessary to maintain the skin without any wrinkle production?
- A. Biotin
 - B. Thiamine
 - C. Riboflavin
 - D. Vitamin C
33. What vitamin is required for synthesis of prothrombin (blood clotting)?
- A. Vitamin A
 - B. Vitamin E
 - C. Vitamin K
 - D. Vitamin D

34. Main function of insulin hormone is to
- A. increase glycogen in liver
 - B. decrease glycogen in liver
 - C. increase blood sugar
 - D. decrease blood sugar
35. The non-sugar part of glycosides
- A. aglycone
 - B. genin
 - C. both A and B
 - D. none of the above
36. Which of the following is odd one out?
- A. glucose
 - B. fructose
 - C. cellulose
 - D. glucuronic acid
37. Which of the following is not true about lactose?
- A. It can be obtained from cow's milk
 - B. It can be used as tablet diluent
 - C. It is equal to galactose + fructose
 - D. It can be used as a nutrient in infant foods
38. Which of the following is not a constituent of starch?
- A. amylose
 - B. amylopectin
 - C. amaril
 - D. all of the above
39. Which of the following is used as building block rather than energy store?
- A. starch
 - B. dextrose
 - C. cellulose
 - D. dextrans
40. Which of the following is not a use of cellulose?
- A. in dressings
 - B. in filtration medium
 - C. in tube lights
 - D. in tableting

SECTION B

[Answer **ALL** questions]

41. Define the following (4 marks)

- a) vitamins
- b) hypovitaminosis
- c) avitaminosis
- d) tannins

42. State four natural sources of vitamin A. (4 marks)
43. State two functions of vitamin C. (4 marks)
44. Give any four medicinal uses of tannins. (4 marks)
45. Give four general uses of volatile oils. (4 marks)
46. List any four drugs and their natural sources. (4 marks)
47. State any four constituents of resins. (4 marks)
48. State two functions of in alkaloids plants. (4 marks)
49. State two pharmacological activities of alkaloids. (4 marks)
50. State one function of each of the following. (4 marks)
- a) inulin
 - b) insulin

SECTION C

[Answer any **TWO** questions]

51. a) Classify vitamins. (4 marks)
b) Give importance of any four vitamins from each class. (16 marks)
52. Discuss the classification of fixed oils on the basis of their ability to absorb oxygen from air. (20 marks)
53. Discuss the importance of tannins. (20 marks)