

FINAL EXAM 2016

إسم الطالب/ة بالعربية (ثلاثي):

الرجاء عدم الكتابة بقلم الرصاص

I. Select the Best Correct Answer:

(75M)

1	The biological activity of many alkaloids is often dependent on: a. Amine function b. N-CH <sub>3</sub> group c. Toxicity level d. Dose administrated	41	The main alkaloid in Pomegranate is: a. Punicalagin b. Isopelletierine c. Piperidine d. None of the above
2	Hegnauer's classification based on: a. Type of nitrogen b. Biochemical origin c. Biological origin d. (A+B)	42	Black piper increase the metabolic rate. a. Truth b. False
3	As a prefix, Nor designates: a. Dehydration b. Isomers c. N-methylation d. (A+C)	43	The nicotinic acid component of nicotinamide is synthesized in animals by degradation of: a. Phenylpropane b. Phenylalanine c. Tryptophan d. Anthranilic acid
4	Some alkaloids are amphoteric due to: a. The presence of nitrogen groups in their molecule. b. The presence of basic groups in their molecule. c. The presence of acidic groups in their molecule. d. The presence of salts in their molecule.	44	Anabasine is produced from nicotinic acid and: a. Ornithine b. Lysine c. Tyrosine d. Niacin
5	Most alkaloids are crystalline solids except nicotine. a. Truth b. False	45	Nicotinic acid in large doses can lower both cholesterol and triglyceride concentrations by inhibiting their synthesis. a. Truth b. False
6	The value of solubility due to variation in structure and salts are variable. a. Truth b. False	46	Psychoactive and hallucinogenic properties of cactus due to: a. Decarboxylation product from L-DOPA L dihydroxyphenylalanine. b. Convert dopamine into mescaline. c. Convert mescaline into dopamine. d. Dopamine

7	Alkaloids are more stable in solution than in the dry state. a. Truth b. False	47	Cathinone is structurally similar to synthetic amphetamine. a. Truth b. False
8	Hot dilute acids and concentrated mineral acids may cause: a. Dehydration b. Hydrolysis c. Demethylation d. All of the above	48	Ephedrine is a directly acting sympathomimetic amine with effect to noradrenaline. a. Truth b. False
9	Van-Urk's test for ergot alkaloids, these give a violet color a. Truth b. False	49	Ephedrine is able to displace norad from storage vesicles in the nerve which can then act on receptors. a. Truth b. False
10	Selection of a suitable method for extraction alkaloids forms plants which depend on: a. Scale and purpose of the operation b. Nature of raw material c. Solubility of the active ingredients d. (a+b)	50	The stimulant and thermogenic effect of <i>Ephedra sinica</i> due to presence of: a. Ephedrine b. Pseudoephedrine c. Norephedrine d. (A+B)
11	The use of strong alkali should be avoided in case of ester alkaloids a. Truth b. False	51	The initial burning effect of capsaicin is due to: a. Affect reward system b. Affect pain receptors c. Inhibit CNS, making pain less effective d. Feel reducing the pain not an effect
12	The pyrrolidine ring system is formed initially as a $\Delta^1$ -pyrrolinium cation. a. Truth b. False	52	Peoyocactin, one of the active ingredients of peyote with: a. Hallucinations effect b. Narcotic effect c. Antidepressant effect d. Antibiotic effect
13	Vitali-Morin reaction is specific for ornithine alkaloids when a dark violet color is developed. a. Truth b. False	53	The principal opium alkaloid (s) is: a. Morphine b. Morphine, codeine, & thebaine c. Morphine, codeine, & papaverine d. All ingredients mentioned above
14	Tropan alkaloids are responsible for the anticholinergic-parasympatholytic effect. a. Truth b. False	54	Biosynthetically, morphine can be synthesized by: a. conversion of thebaine by $\alpha$ -codeine b. conversion of thebaine by $\alpha$ -oripavine c. Total extract of opium d. (A+B)

*Atropa belladonna* preparations act as a parasympatholytic via dopamine transmitter.

- Truth
- False

55

Crude opium has been used since antiquity as:

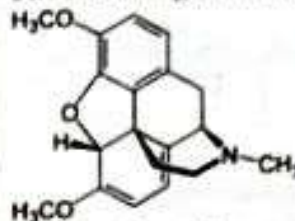
- An sleeping agent (narcotic sleeping)
- An analgesic & cough treatment agent
- An anti-diarrhea therapy.
- All of the above

*Atropa belladonna* preparations release hallucinogenic effect.

- Truth
- False

56

The following structure is:



- Morphine
- Codeine
- Thebaine
- Reticuline

By blocking the action of serotonin, atropine serves as an antidote for organophosphorus poisoning.

- Truth
- False

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Morphine in small doses, in pharmacy, used as:

- Analgesic agent for cancer diseases
- Antidepressant agent
- An anti-diarrhea in severe cases.
- None of the above

Injections of atropine are used in the emergency treatment of:

- Angina pectoris
- Tachycardia
- Cardiac arrest
- Ventricular fibrillation

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Codeine used in pharmacy as:

- Morphine-like
- Just antitussive
- An analgesic instead of morphine (one-tenth the potency of morphine)
- None of the above

Henbane was traditionally used as:

- Antiasthmatic
- Pain killer
- Antispasmodic (in biliar spasm)
- (A+C)

59

Noscipine or narcotine, a drug with:

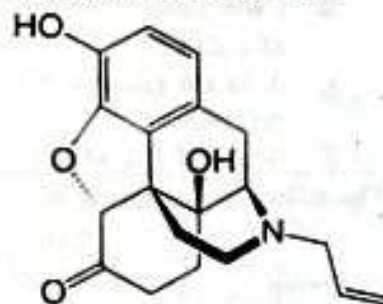
- Antitussive without narcotic effect.
- Antitussive with narcotic effect.
- Antitumor effect.
- (A+C)

Henbane:

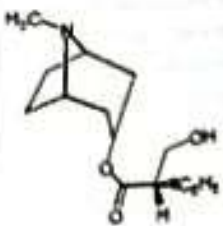
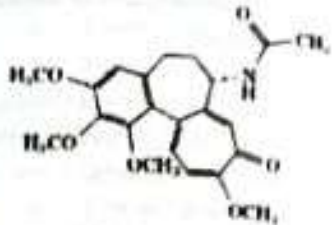
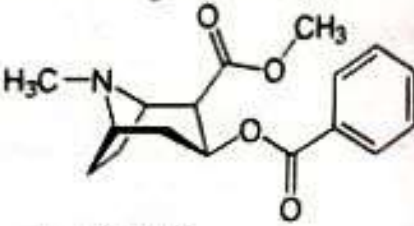
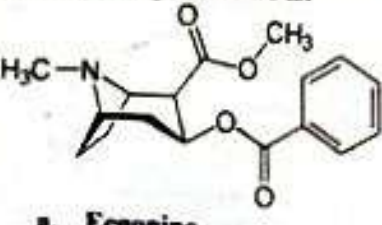
- Inhibit affects the muscarinic action
- Stimuli affects the muscarinic action
- Inhibit affects the nicotinic receptors
- Stimuli affects the nicotinic receptors

60

The followin structure is:



- Codeine
- Naloxone
- Naltrexone
- Methadone

21	<p>The following structure is:</p>  <p>a. Atropine b. Hyocyanine c. Cocaine d. Hyocine</p>	61	<p>The following structure is:</p>  <p>a. Colchicine b. Emetine c. Vincristine d. Vinblastine</p>
22	<p>Habituation is a condition resulting from the repeated consumption of a drug.</p> <p>a. Truth b. False</p>	62	<p>Actually, colchicine is the one of a remedy for:</p> <p>a. Gout b. Cancer as antiplogistic eff c. Eczema</p>
23	<p>The following structure is:</p>  <p>a. Atropine b. Hyocyanine c. Cocaine d. Hyocine</p>	63	<p>Ipecacuanha has antiamebic action. Emetine and cephaeline are both protein synthesis inhibitors, inhibiting the translocation stage.</p> <p>a. Truth b. False</p>
24	<p>Addiction is:</p> <p>a. Psychological disorder. b. Compulsive use and loss of control of a drug. c. A brain disease with permanent relapse d. None of the above</p>	64	<p>Serotonin is one of simple hydroxy derivatives of tyramine.</p> <p>a. Truth b. False</p>
25	<p>The following structure is:</p>  <p>a. Ecgonine b. Cocaine c. Methylecgonine d. Benzoulecgonine</p>	65	<p><i>Hordium vulgare</i> is a good remedy for reduction.</p> <p>a. Truth b. False</p>

**Tolerance** :Is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug's effects over time.

- a. Truth
- b. False

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**Eating whole grain barley can:**

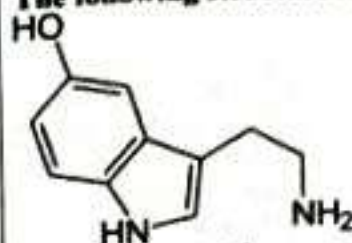
- a. Suppress appetites
- b. Regulate blood sugar
- c. Increase diuresis
- d. All of the above

**Physical dependence** :occurs when a drug has been used habitually and the mind has become accustomed to its effects.

- a. Truth
- b. False

67

**The following structure is:**



- a. Tramadol
- b. Serotonin
- c. Dopamine
- d. Acetylcholine

**The most dangerous form of cocaine when:**

- a. Smoked
- b. Snorted
- c. Injected
- d. All of the above are addictive & dangerous

68

**Peganum harmala is used as:**

- a. Anti-inflammatory agent
- b. Antidepressant
- c. Antitumor
- d. Antihypertensive

**The best & long duration test for cocaine detection is:**

- a. Saliva test
- b. Urine test
- c. Blood test
- d. Hair test

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**Rauwolfia has been used in traditional medicine as:**

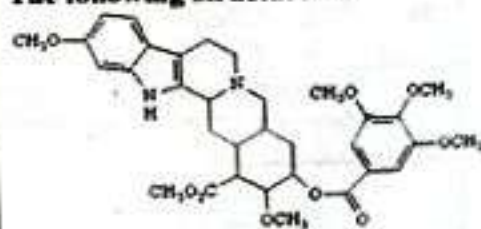
- a. Antidote to snake-bite & against stomach pains
- b. Antidote to snake-bite & against fever
- c. Antidote to snake-bite & against vomiting
- d. All of the above

**The high poisoning properties of pyrrolizidine skeleton due to:**

- a. 1,2-unsaturation in the pyrrolizidine ring
- b. 2,3-unsaturation in the pyrrolizidine ring
- c. ester function on the side-chain of the pyrrolizidine ring
- d. (A+C)

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**The following structure is:**



- a. Reserpine
- b. Serpentine
- c. Rescinuamine
- d. Deserpidine

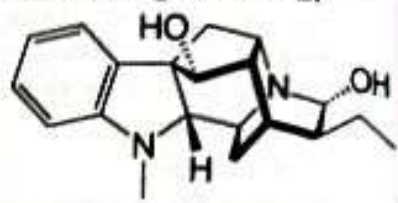

**Indicine-N-oxide demonstrated significant:**

- a. Hepatotoxic activity
- b. Antileukaemic activity
- c. Antidepressant
- d. (B+C)

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**Reserpine in small doses used as hypotensive and in big doses used as tranquilizers.**

- a. Truth
- b. False

32	<p>Cocaine is a strong CNS stimulant that increases levels of</p> <ol style="list-style-type: none"> <li>Acetyl choline</li> <li>Dopamine</li> <li>Serotonin</li> <li>Cocaine base</li> </ol>	72	<p>The following structure is:</p>  <ol style="list-style-type: none"> <li>Ajmalicine</li> <li>Ajmaline</li> <li>Strychnine</li> <li>Brucine</li> </ol>
33	<p>Cocaine Hydrochloride acts as a local anesthetic and safe in all cases or doses.</p> <ol style="list-style-type: none"> <li>Truth</li> <li>False</li> </ol>	73	<p>Cathartus vinca rosea have:</p> <ol style="list-style-type: none"> <li>Anti cancer properteis.</li> <li>Anti diabetic properties.</li> <li>Antioxidant properteis.</li> <li>All of the above</li> </ol>
34	<p>Elimination of cocaine from the body depend on:</p> <ol style="list-style-type: none"> <li>Amount of drug administrated</li> <li>Regularity of using</li> <li>Body weight</li> <li>All of the above</li> </ol>	74	<p>Ergotamine is:</p> <ol style="list-style-type: none"> <li>A partial agonist of <math>\alpha</math>-adre and 5-HT receptors.</li> <li>A vasoconstrictor compon</li> <li>A reversible inhibitor of cholinesterase.</li> <li>A compound with ability to adrenergic, dopaminergic, serotonergic receptors.</li> </ol>
35	<p>Cocaine is detectable in saliva after</p> <ol style="list-style-type: none"> <li>Few minutes</li> <li>Few hours</li> <li>Few days</li> <li>Not detectable</li> </ol>	75	<p><i>Paullinia cupana</i> used to:</p> <ol style="list-style-type: none"> <li>Relieve mental and physical</li> <li>Relieve abdominal spasm</li> <li>Stimulate CNS.</li> <li>Burn fats</li> </ol>
36	<p>Borage contains gamma-linolenic acid (GLA).</p> <ol style="list-style-type: none"> <li>Truth</li> <li>False</li> </ol>		
37	<p>Borage oil is used for neurodermatitis, Pre Menstrual Syndrome (PMS) and as a food supplement.</p> <ol style="list-style-type: none"> <li>Truth</li> <li>False</li> </ol>		
38	<p>The following structae is</p>  <ol style="list-style-type: none"> <li>Tussilagin</li> <li>Allantoin</li> <li>Lupinine</li> </ol>		

d. None of the above

Eyebright refer to:

- a. *Lupinus termis*
- b. *Lobelia inflata*
- c. *Punica granatum*
- d. *Ephedra sinica*

Lobelia is applied to the skin for muscle pain, joint lumps associated with rheumatoid arthritis.

- a. Truth
- b. False

1	21	41	61
2	22	42	62
3	23	43	63
4	24	44	64
5	25	45	65
6	26	46	66
7	27	47	67
8	28	48	68
9	29	49	69
10	30	50	70
11	31	51	71
12	32	52	72
13	33	53	73
14	34	54	74
15	35	55	75
16	36	56	
17	37	57	
18	38	58	
19	39	59	
20	40	60	

**II. Please answer ONE of the following:**

**(5M)**

- a. Formation of serotonin
- b. Formation of papaverine

**III. Answer ONE of the following**

**(5M)**

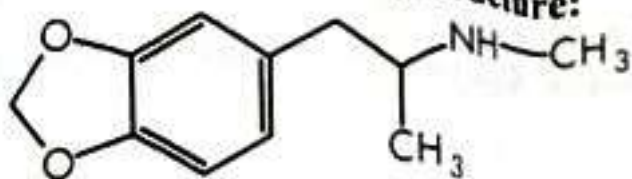
- a. Isolation of reserpine
- b. Isolation of pilocarpine



- V. Discuss briefly clear, chronologic and in points just ONE of the following: (10M)
- a. Mechanism of nicotine addiction.
  - b. Cocaine-Nicotine-Morphine-LSD-caffeine relationship

**GOOD LUCK!**  
Dr. Mazen A. El-Sakka  
May 18, 2016

V. Comment the following structure:



a. Mention the name of the structure.

(1M)

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b. Mention the name of pharmacological group?

(1M)

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c. Regarding to this group, mention 3 pharmacological properties for the drug.

(3M)

1.

2.

3.