

**B.V.Sc. & A.H. (Third Professional) Examination – 2019**  
**Veterinary Pharmacology and Toxicology Paper – I**  
**(MSVE 2016)**

**To be filled by the candidate:**

Candidate's Roll Number:

In figure .....

In words .....

Candidate's Enrolment Number: .....

Day and date of examination: .....

Please see for general instructions overleaf.

**Signatures of invigilators verifying the details filled by the candidate**

Signature of invigilator 1: ..... 2: .....

Candidate should not write anything below this line

**Marks to be filled by the examiner:**

Section A	
Q. No.	Marks
1.	
2.	
3.	
4.	
5.	
<b>Total</b>	

Total Marks obtained:

In figures: ..... In words: .....

Signature of examiner: .....



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**INSTRUCTIONS TO THE CANDIDATES**

1. The invigilator and the members of the Flying Squad are empowered to take search of the examinees during the examinations.
2. Candidate should read the question paper and the instructions carefully before they begin to write answers.
3. The candidate will not be allowed to leave the examination hall before one hour form the end of the examination time.
4. Write on the cover page all the required entries correctly and get the signature of the invigilators.
5. Write legibly in the space provided for answer of each questions/sub-questions according to instruction given in the question paper booklet (question paper).
6. Do not write your name on any part of the question paper / answer booklet.
7. Do not leave examination hall without handing over question paper / answer booklet to the invigilator incharge.
8. No leaves should be torn out of the question paper / answer booklet.
9. Candidate attempting to use unfair means or talking to one another will be dealt with severely as per unfair means rules.
10. No written paper or book notes etc. should be brought to examination hall.
11. Total number of pages of question paper / answer booklet be checked before writing.
12. Candidate should not bring in any article other than pens and admit card. Use of Mobiles, calculators on any other electronic device in the examination hall is strictly prohibited.

**SPACE FOR ROUGH WORK**

**B.V.Sc. & A.H. (Third Professional) Examination – 2019**  
**Veterinary Pharmacology and Toxicology Paper –I**  
**(MSVE 2016)**

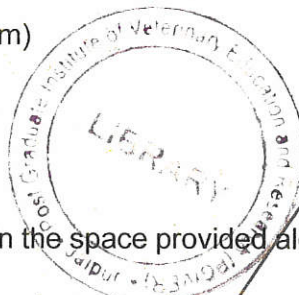
**Time: Three Hours**

**Maximum Marks: 100**  
**Weightage: 20**

- Unit-1 (General Pharmacology)
- Unit-2 (Drugs Acting on Autonomic Nervous System)
- Unit-3 (Drugs Acting on Central Nervous System)
- Unit-4 (Drugs Acting on Different Body Systems)

**Instructions:**

- 1) Attempt all questions
- 2) Answer of all questions is to be written in the space provided along with the question in question-booklet.
- 3) Overwriting is not allowed in the objective type question.



**Q.1 Fill in the blanks.**

**(20x0.5 = 10)**

- 1.1 \_\_\_\_\_ is process of coupling of a drug with an endogenous substrate for facilitating excretion.
- 1.2 Minimum dose of a drug producing desired response is called \_\_\_\_\_ dose.
- 1.3 An agonist able to produce sub-maximal effects and has moderate efficacy, is known as \_\_\_\_\_.
- 1.4 \_\_\_\_\_ is the branch of pharmacology that deals with the study of sources of drugs.
- 1.5 \_\_\_\_\_ is percentage of unchanged form of drug reached to systemic circulation, out of total administered drug.
- 1.6 Selegiline is a selective irreversible \_\_\_\_\_ inhibitor.
- 1.7 Xylazine is the preferred emetic drug in \_\_\_\_\_ (species).
- 1.8 Cloprostenol is a synthetic \_\_\_\_\_ analogue used for the luteolytic property in cattle.
- 1.9 Misoprostol is stable analogue of \_\_\_\_\_ which is used to inhibit gastric acid secretion.

- 1.10 Dobutamine is a selective \_\_\_\_\_ receptor agonist used in cardiogenic shock.
- 1.11 \_\_\_\_\_ is the active metabolite of chloral hydrate.
- 1.12 Capsules containing coated granules are known as \_\_\_\_\_
- 1.13 Serotonin is biogenic amine synthesised from the \_\_\_\_\_ amino acid.
- 1.14 Agent which increases the fluidity and volume of saliva are known as \_\_\_\_\_.
- 1.15 Etorphine is having \_\_\_\_\_ times more analgesic potency than morphine.
- 1.16 Pilocarpine, a natural alkaloid used to treat glaucoma, is derived from \_\_\_\_\_.
- 1.17 Althesin is an example of \_\_\_\_\_ type of anaesthetics.
- 1.18 Tannic acid has \_\_\_\_\_ action on mucous membrane.
- 1.19 Bromocriptine is potent agonist of \_\_\_\_\_ receptors.
- 1.20 The safe speed of fluid injection in dehydrated small animals is \_\_\_\_\_ ml/kg/hour.

**Q.2 Choose the most suitable answer and write the number of the correct answer 1 or 2 or 3 or 4 in the space given against each sub question:**

**(20x0.5 = 10)**

- 2.1 Bioavailability of a drug is affected by: ( )
1. First pass metabolism.
  2. Route of drug administration.
  3. Dosage form.
  4. All of the above.
- 2.2 Verapamil blocks transport of : ( )
1. Chloride ion
  2. Calcium ion
  3. Potassium ion
  4. Sodium ion
- 2.3 Following statement is true for transfer of drugs by facilitated diffusion: ( )
1. It is energy dependent.
  2. It is carrier mediated.
  3. It takes place against the concentration gradient.
  4. All of the above

- 2.4 Droperidol and fentanyl citrate are combined in the ratio of : ( )
1. 1:50
  2. 50:1
  3. 5:1
  4. 1:5
- 2.5 Phase II biotransformation reactions involve all of followings except:( )
1. Acetylation
  2. Methylation
  3. Oxidation
  4. Glucuronidation
- 2.6 Streptokinase is a : ( )
1. Analgesic drug
  2. Anti-platelet drug
  3. Fibrinolytic drug
  4. Anti-inflammatory drug
- 2.7 An antagonist posses: ( )
1. Affinity only
  2. Efficacy only
  3. Both affinity and efficacy
  4. Neither affinity nor efficacy
- 2.8 Stimulation of  $\beta_3$  receptors is associated with: ( )
1. Lipolysis
  2. Bronchodilation
  3. Tachycardia
  4. Platelet aggregation inhibition
- 2.9 Which of the following drug causes metabolic enzyme induction: ( )
1. Carbamazepine
  2. Phenytoin
  3. Phenobarbitone
  4. All of the above
- 2.10 Following cholinomimetic drug is used in the cases of atropine overdose: ( )
1. Lobeline
  2. Physostigmine
  3. Nicotine
  4. Carbochol
- 2.11 The main mechanism of most drugs absorption in GI tract is: ( )
1. Active transport
  2. Filtration
  3. Endocytosis
  4. Passive(lipid) diffusion
- 2.12 Example of local anaesthetic drug which is also used as antiarrhythmic agent : ( )
1. Lignocaine
  2. Mepivacaine
  3. Bupivacaine
  4. Ropivacaine
- 2.13 Following type of drugs bind to albumin fraction of plasma proteins: ( )
1. Weak acids only
  2. Weak bases only
  3. Weak acids and neutral drugs
  4. Weak bases and neutral drugs

- 2.14 Appropriate term used for the unpredictable, inherent, qualitatively abnormal reaction to a drug is : ( )
1. Idiosyncratic response
  2. Iatrogenic response
  3. Allergic response
  4. Non-pharmacological response
- 2.15 IV administration of noradrenaline in dogs results into following effect on blood pressure: ( )
1. Gradual rise
  2. Fall in B.P.
  3. Biphasic response
  4. No effect
- 2.16 Which of the following phenomenon is possible when combination of two drugs is used? ( )
1. Tolerance
  2. Tachyphylaxis
  3. Drug dependence
  4. Synergism
- 2.17 Moiety responsible for the duration of the local anaesthetic action is: ( )
1. Lipophilic group
  2. Amino group
  3. Ionizable group
  4. Intermediate chain
- 2.18 Mechanism of action of aspirin is by inhibiting: ( )
1. Thromboxane A2 synthase
  2. Phosphodiesterase
  3. phospholipase A2
  4. Cyclooxygenase-1
- 2.19 All of the following are examples of volatile oil except: ( )
1. Peppermint oil
  2. Eucalyptus oil
  3. Castor oil
  4. Clove oil
- 2.20 The clinical indication of medroxyprogesterone acetate in bitches is for: ( )
1. Mismating
  2. Oestrus suppression
  3. Delayed ovulation
  4. Induction of oestrus

**Q.3 Attempt any ten out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (10x2.0= 20)**

3.1 What was the contribution of Colonel Sir Ram Nath Chopra in the field of pharmacology?

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3.2 Define 'Pharmacovigilance'.

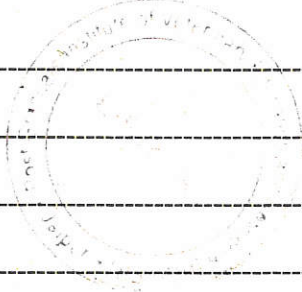
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3.3 Why drug doses are usually smaller in young animals than adult ones?

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3.4 What are two major disadvantages of intravascular route of drug administration?

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3.5 Define drug potentiation and give one example.

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3.6 Enlist the pharmacological properties of diazepam.

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3.7 Define basal anaesthesia.

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3.8 Differentiate the terms sedatives and hypnotics.

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3.9 What are the major neurotransmitters of adrenergic transmission?

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3.10 Give example of widely accepted chemical euthanizing agent in dogs.

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3.11 Which fluid therapy is preferred to correct metabolic acidosis?

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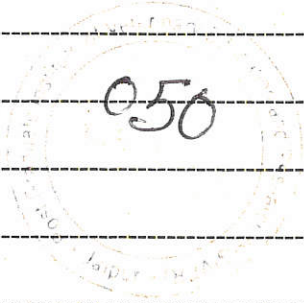
3.12 Give the formulae for therapeutic index.

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**Q.4 Attempt any six out of the following eight questions. Answer of each question should be in 8 to 10 lines. (6 x 6.0 = 36)**

4.1 Classify expectorants with suitable examples.

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4.2 Explain the pharmacological utilities of pre-anaesthetic drugs.

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4.3 Explain difference between ecbolics and tocolytics with examples.

4.4 Classify anti-emetic drugs with suitable examples.

4.5 What is atropinisation? Give its signs and clinical indications.

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4.6 Explain the process of 'Fight or Flight Response'.

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4.7 What should be the ideal properties of gaseous anaesthesia?

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4.8 Discuss the counter-irritants and their clinical uses with examples.

**Q.5 Answer the following question in 1-2 pages (attempt any two).**

**(2x12.0 = 24)**

- 5.1 What is the need of phase I and II drug metabolism? Enlist sites of drug metabolism. Discuss various phase –I metabolic reactions with example.
- 5.2 Write down the sources, pharmacodynamics and clinical uses of digitalis. How digitalization is done in dogs?
- 5.3 What are autacoids? Classify them with suitable examples. Explain the bio-synthesis of histamine and role of antihistaminic drugs in allergic diseases.

Q. No. ....

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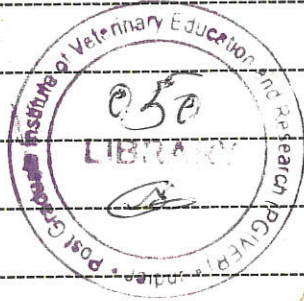
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Q. No. ....

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