

Dubai Ministry Exam

Revision

Rules & Regs

The Ministry describes a practitioner vet as someone who can...5 points

- 1. Examine, diagnose diseases or conducting medical analysis.
- 2 . Prescribe, treat or practicing treatment or surgical operation.
- 3 . Offering veterinary consultations, medical certificates and or medical reports about animal health.
- 4. Taking samples for laboratory analysis, post mortem X - ray and evaluate the results for diagnosis.
- 5. Selling medicines and chemicals used for animal treatment.

If a vet is absent for 60 days from vet establishment, what must owner do? (2 points)

- **(Article 16)** If the veterinarian of the establishment was absent for sixty days a year either connected or continuous, the owner of the establishment **must close the establishment and inform the ministry and the concerned body in the Emirate in writing**, unless he has already informed them that an alternative licensed veterinarian is working in the establishment during the absence of his colleague. The decision of the ministry and the concerned party should not exceed thirty days with effect from the date of the received notice by the owner of the establishment.

Practitioner Veterinarians shall have the following (Article 3):

1. BA certificate in the veterinary medicine and animal treatment from recognized university by UAE.
2. Practical experience of minimum 5 years to obtain the license as practitioner veterinarian and 2 years minimum experience for UAE citizens.
3. Practical experience of minimum one year to obtain trade license in veterinary medications and UAE citizens are excepted of this condition.
4. Applicants for practicing veterinary profession in the field of animal treatment or lab. Diagnostics shall successfully pass the tests of the technical committee for veterinary licensing . UAE citizens are excepted from this condition . Applicants for trade license in veterinary medications shall only forward their certificates.

Veterinarian's Responsibility:

1. Abide by the requirements of the profession, eg meticulousness & integrity & comply w ethics of profession.
2. Shall contribute & cooperate w health & vet institutions in the state, to preserve the public health & animal health
3. Will be held responsible should he make any mistake that shall harm the animal, when d/t ignorance of technical matters
4. Responsible for prep, changing or admin of vet prescriptions
5. Abide by the decisions taken by the competent authorities re: prices of the vet drug preparations

Notifiable: Cattle

Cattle Plague (Rinderpest)

- Can affect other farm animals, incl Camels
- OIE Class A disease – serious economic impact
- Early fever, dull, innapp, poor coat, rapid RR, nasal & ocular discharge, mm eruptions & ulceration.
- Constipation → D+ (foul & H+)
- 6-10dd death. **VERY CONTAGIOUS**

Foot & Mouth (FMD)

- Viral disease – cloven-hooved animals (can affect Camelids)
- Debilitating & economic loss
- 3-6dd typical onset
- Ulcers in mouth & feet
- Dull, innapp, painful, drooling, blisters
- Spread in fluids from blisters – airborne & mechanical

Contagious Pleuropneumonia

- *Mycoplasma mycoides* – lungs & pleura
- OIE Class A disease – economically serious
- Temp rise & dry, husky C+. Rapid RR. Pain on ribs. Emaciation.
- Yellow fluid in pleura, fibrous tissue, abscesses.
- Animals that survive the acute phase – infect others.

Rabies

- Lyssavirus – fatal, esp in Mammals
- Varying progression/ speed of disease
- Spread in saliva (via bites)
- Sudden Bx changes, paralysis & death, hydrophobia
- Lab confirmation required
- Vacc in Dubai q1yr

Tuberculosis

- *Mycobacterium bovis* – cattle, but can also affect a variety of other spp, incl camelids
- Zoonotic
- Weakness, C+, wt loss
- Airborne transmission & Direct transmission

Bluetongue

- Viral disease (*Orbivirus*)
- All ruminants, incl Camelids (NOT horses & pigs)
- Sheep mostly affected; Cattle = reservoir
- mm of mouth, nose, coronary band
- Biting midges (*Culicoides*)
- NOT zoonotic

Anthrax

- *Bacillus anthracis* – acute & generally fatal
- Humans AND all animal spp
- Often sudden death BUT can be cx (dull, innapp, colic, shivering, twitching, fits, small trickle of bld from nostrils & F+ etc)
- Spores may form – highly resistant
- May respond to ABs if caught early
- Humans – skin version = red, boil w black core

Johne's Disease

- *M.avium paraTB* (wasting disease) – spread in F+, milk & colostrum
- D+, reduced yields, wasting & death
- **Poss cause of Crohne's Disease in humans**
- Slow growing → difficult to detect <2yrs of age

Brucellosis

- *Brucella abortus* (cattle) & *Brucella melitensis* (sheep & goats)
- **Zoonotic** – ‘undulant fever’ (flu like) & arthritis / *B.melitensis* – ‘Malta fever’
- Abortion 5th-7th mth; Male infertility
- Spread by contact – incl. inf milk & uterine secretions
- In UK, inf cattle & at risks are culled

Ulcerating Lymphangitis

- *Corynebacterium pseudotuberculosis* (bacterial)
- Chronic abscesses (pectoral region, ventral abd), ulcerative dermatitis
- Can cause Abortion & Mastitis
- Healing often w/o tx or w ltd topical tx
- Likely enter via skin wounds – i/m inj, vectors (eg stable flies), contaminated fomites (eg grooming equipment).
HYGIENE IMP
- Isolate by swabbing & culture
- Tx w hot packs, poultices, iodine flushing, abs, sx
- Abscesses can be v large & take mths to resolve

BSE

- Prion disease. Adults (5yrs+), both M/F
- Neurological – several wks (mentation, postural, locomotor & sensation changes)
- **Progressive & FATAL**

Vesicular Stomatitis

- Cattle, Pigs & Horses
- Clinically indistinguishable from FMD
- dd 1-5, T>40.5C, epithelial blanching & vesicle formation (eg coronary band)
- Requires lab detection cf FMD

Notifiable: Horses

Glanders & Farcy

- Bacterial (*Burkholderia mallei*) – serious & zoonotic (95% mortality rate if untreated)
- 2x forms: **Glanders** (nostrils, s/max LNs & lungs) / **Farcy** (surface of limbs & body)
- **Important to wear safety gear – v contagious**
- Horses – chronic cf Donkeys/ Mules – acute
- **Ingestion → bld inf, localised in lungs, skin & mm of nasal passage**
- Wound inoculation a poss route in humans
- **Nasal discharge, C+, fever, ulceration, nodules, septicemia (DEATH)**
- Dx by **MALLEIN TEST** or **COMPLIMENT FIXATION TEST**
- **Mallein Test** = small dose (0.1ml) of Ag inj below eye – swelling + fever often indicates pot carrier state

Strangles

- *Streptococcus equi* (bacterial) – most commonly diagnosed inf equine dz in world
- Cx: fever, profuse nasal discharge, abs LNs (head & neck) – may be restrictive to airway
- **Can be FATAL (causes pain & distress)**
- Economically v important – can shut yards down
- **Most recover quickly; some v ill for many dd.**
- Bastard Strangles – abs away from hd & neck
- **Can also trigger purpura haemorrhagica – causes H+ into gums & organs (eg lungs) = often FATAL**
- Dx: bacterial culture (pus) & PCR
- **Incubation 7-14dd, spread by close contact**
- Inf horses can shed for long periods – interval bx new cases can be up to 3wks+

Equine Infectious Anaemia

- Viral (via biting insects) – all equids (a lentivirus – form of retrovirus, similar to HIV)
- Often **FATAL**
- **Rel localised/ Doesn't spread far**
- Humane destruction = control (d/t survivors become lifelong carriers & infectious)
- **Acute, Chronic or Sub-Clinical (variable incubation – dd → mths; usually 1-3wks)**
- Recurring fever, anaemia, oedema, emaciation, death. Ill thrift & predisposition.
- **Similar cx to EIA incl African Horse Sickness, Dourine, Anthrax, EVA, Equine Influenza...etc**
- Test = Coggins test (agar immunodiffusion)

Dourine

- *Trypanosoma equiperdum* – COITUS (either direction)
- Inflammation of external genital areas, skin lesions & paralysis
- Incubation: 1-4wks
- Extensive swelling & ulceration & discharge.
- Non-signs – stiffness & weakness of limbs. Loss of condition → Euthanasia

Equine Encephalomyelitis

- Viral - Mosquito-borne
- Paralysis & other nn cx
- Can be ZOOONOTIC & infect birds
- Natural reservoir = birds, small mammals, reptiles & amphibians
- Incubation = 1-3wks
- Fever, depression, anorexia, hypersens to sound & touch, excitement, apparent blindness, hanging heads
- Dx by samples of BLOOD & BRAIN

Equine Influenza

- 2x viruses: *Orthomyxovirus A/Equi-1 & 2*
- Highly contagious
- No carrier status – clinical outcome depends on immune status
- Mild, inapparent dz → severe dz (Rarely fatal)
- Spread by inhalation of inf resp secretions
- Incubation 1-3dd
- Cx: fever, serous nasal discharge, SM LN enlarge, C+, depression, anorexia, weakness
- Most recover in 2-3wks; severely affected – 6mths
- Dx by virus isolation & Ag detection
- Tx: Rest & Supportive care (1wk rest/ 1 d of fever), Abs, NSAIDs
- Prevention: Vaccination & Hygiene

Equine Plague (African Horse Sickness)

- Orbivirus (9x strains) – biting insects
- Zebra = wild reservoirs. Sub-Saharan Africa = endemic.
- Fever, laboured breathing, C+, nasal discharge
- Environmental conditions + spread (warm, moist weather & high rainfall = gd for vectors)
- Housing & protecting against vectors = prevention

Equine Viral Arteritis

- Equine arteritis virus (EAV)
- Abortions, fever, depression, lethargy, stiff gait, nasal discharge, conjunctivitis, distal swelling, periorbital & perineal swelling
- Lab diagnosis required
- No treatment BUT a vaccine (UK & Europe)
- Spread by 4x routes:
 - Venereal during mating
 - AI (inf semen)
 - Contact w aborted foetuses + fluids
 - Direct contact (droplets from resp tract – C+/ snorting)

Contagious Equine Metritis

- Bacterial venereally transmitted dz:
 - *Taylorella equigenitalis*
 - *Klebsiella pneumoniae*
 - *Pseudomonas aeruginosa*
- Direct (sexual) & Indirect (water, instruments, hands etc) transmission
- 3x stages of inf:
 - **Acute**: active inflam & discharge (1-6dd after mating)
 - **Chronic**: cx less obvious but deep-seated & difficult to clear. Discharge (up to 80dd after inf)
 - **Carrier**: no cx BUT mare still infectious
- **MALES** – passive carriers (no Cx)
- **Prevention**:
 - Swab males & females before mating
 - If inf, do not use until 100% treated
 - Hygiene

Notifiable: Sheep & Goats

Sheep & Goat Pox

- Viral (Goat Pox = *variola caprina*)
- Can be rapid (usually lambs) – fever, paralysis, red spots on eyes/ nose membranes (death in few dd)
- Adults: fever, anorexia, eruptions, oozing (thick, reddish), abortion, depression, pneumonia (secondary to bacterial inf), mastitis

Peste des Petits Ruminants

- Aka Goat Plague (Rinderpest-like)
- Erosive stomatitis, enteritis, pneumonia & death.
- Sub-acute (Sheep) → Fulminating FATAL (Goats)
- Clinical evolution like Rinderpest but FASTER
- Incubation 2-6dd, affected animals – high fever & nasal catarrh. Then severely depressed, sneeze freq & lick lips constantly.
- Mucosal erosions, profuse salivation & D+, nasal & ocular discharge, fetid breath & F+, DEATH (4-10dd)
- Long convalescence & complicated by other infs
- Diagnosis: Cx & detecting Ag (LN/ tonsils of newly dead)
- Diff from Rinderpest req isolation of virus in cell cultures.
- CATTLE are REFRACTORY to inf.
- Spread to Middle East via goat & sheep sales. Has been an epidemic in Al Ain Zoo

Scrapie

- Fatal TSE (sheep & goats) - PrP
- 2x types: **Classical** & **Atypical**
- **Classic – most common 2-5yrs of age, insidious & subtle onset**
- Cx: scratching, nibbling, teeth grinding, wool loss/ skin damage, excitability, nervousness/ fear, aggression, depression/ vacant stare, incoord → recumbency, wt loss, DEATH
- Can spread by ingestion of birth fluids, placental material, F+, sheep milk & colostrum
- Selective breeding to increase resistance

Old World Screw Worm

- *Chrysomya bezziana* (Obligate parasite of mammals – required as host for life-cycle)
- Adults = metallic green/ blue w yellow face
- Adults feed on decaying organic matter VS Larvae feed on living & necrotic tissue
- Burrow aggressively into tissues – permanent damage
- Eggs (150-200 at a time) laid in wounds & mucous membranes. Hatch in 24hrs
- 5-7dd feed → drop to ground to pupate
- Cause MYIASIS
- Can affect HUMANS
- Tx: Wound mgt & Insecticides

Notifiable: Fowl

Newcastle Disease

- *Paramyxo virus* (highly contagious) – **GLOBAL**
- Range of Cx: mild illness → severe dz, dull, anorexia, C+, sneezing, D+, nn signs, laying reduction/ misshapen eggs, DEATH
- **Chickens = VERY SUSCEPTIBLE**
- Spread by a) wild birds; b) direct; c) contaminated vehicles etc
- **Strict Biosecurity = IMPORTANT**
- Can cause a transitory conjunctivitis (ZOOONOTIC potential)

Highly Pathogenic Avian Influenza (aka Fowl Plague)

- Type A influenza virus (Highly contagious) – can be ZONOTIC (rare)
- Affects RESP, DIGESTIVE +/-or NN SYSTEM
- Low Path (LPAI) & High Path (HPAI)
- Cx: resp distress, swollen heads, dullness, cyanosis of comb & wattle, loss of app, drop in egg prod
- Spread by mvt of inf birds, contact w resp secretions & f+
- Can exchange genetic material w human influenza virus – genetic recombination

Psittacosis (Ornithosis)

- *Chlamydophila psittaci* – spread by aerosol & faeces (eg dried so aerosolise)
- ZOO NOTIC
- Pet birds & pigeons (large wild popn reservoir)
- Tx = Abs (Tetracyclines) in food
- Control:
 - Preventative husbandry & hygiene
 - Control inf spread (isolation, minimise circulation etc)
 - Disinfection (susceptible to most)

Fowl Typhoid

- *Salmonella gallinarum*
- Can cause substantial losses & high cost to eradicate
- **Biosecurity & Hygiene = VITAL**
- Ddx in any case of significant & increasing mortality in poultry flocks, esp adults.
- Testing advised

Infectious Fowl Cholera

- *Pasteurella multocida* (bacterial)
- Cx: loss of appetite, dullness, D+, breathlessness, joint swelling
- **Can kill many birds when first enters a flock**
- Recovered birds → carriers & continue to contaminate the environment
- Older birds > young / Turkeys > chickens

Infectious Bursal Disease

- *Birnavirus* (IBDV)
- Shed in F+ & transferred by fomites, v stable in environment (hard to eradicate)
- **Highly contagious – may be SUBCLINICAL or CLINICAL**
- Chickens most susceptible at age 3-6wks
- **SUBCLINICAL: most imp economically – severe, long-lasting immunosuppression (d/t immature lymphocyte destruction). Predispose to inf & poor response to vacc.**
- **CLINICAL: sudden onset after incubation of 3-4dd. Cx: prostration, incoord, D+, vent picking, cloacal infl. Can be up to >20% losses.**
- **NO TREATMENT** → Cull & Disinfection. Vaccines are available. Monitor immune status of flocks.

Pullorum

- *Salmonella pullorum* (bacterial) – HIGH MORTALITY (close to 100%)
- Young Chickens & Turkeys
- Spread primarily through egg BUT also direct & indirect contact
- Death usually first dd of life – 2-3wks of age
- Cx: heat seek, anorectic, weak, D+, nodules in liver, spleen, heart etc, firm, cheesy material in ceca, intestinal plaques
- Dx by isolation & serotyping
- Control via cull; Routine serological testing of stock

Dogs

Distemper

- Paramyxovirus (related to Rinderpest & Measles) – highly contagious & systemic
- Cx: Diphasis fever, leucopenia, GI & Resp catarrh, pneumonia, nn cx, hyperkeratosis (hardpad)
- Virus rel unstable in env & disinfectants effective
- Aerosol droplet inf
- Initial lymphatic replication → viraemia & systemic effects
- Fever 3-6dd after inf → systemic effects, incl neurologic cx (ataxia, twitching etc (variable))
- Should be considered in any febrile condition in puppies w multisystemic manifestations
- Tx: limit secondary bacterial inf, IVFT, Abs, nutrition etc (Supportive)
- Vaccination of puppies = Prevention

Zoonoses

Toxoplasmosis

- *Toxoplasma gondii* – lives & multiplies in cat (DH) GIT. Eggs in F+, eaten by mice/ birds (IH) → mm & then eaten by cats. V COMMON & UBIQUITOUS PARASITE
- Rarely symptomatic. Later cx: pneumonia, jaundice (hepatopathy), blindness, Bx changes, paralysis
- Dx: IgG (previous inf) & IgM (current inf)
- Can be treated – Clindamycin (ab)
- **ZOONOTIC** – 50% of ppl will be inf during lifetime. Brief flu-like inf. Prob if PREGNANT – can cause abortion or birth defects (eyes/ brain damage). Dangerous if immunocompromised.
- **Prevention:** HYGIENE & COOK MEAT (70c for 15mins+) & AVOID UNPAST MILK etc.

Leptospirosis

- Dogs = reservoir host for *L.canicola*
- No age or gender predilection
- Incubation period 4-12dd (can be 2dd)
- Cx: fever, depression, lethargy, anorexia, oculonasal discharge, uraemic crisis, V+, dehydration, nephritis, pain, RENAL FAILURE... lots of cx
- Neutrophilic leucocytosis, mild anaemia, thrombocytopaenia, azotaemia, urine abnorms.
- Dx: serology (most freq used), PCR, histopath.
- Tx: supportive, ABS (penicillins & doxycycline)
- Prevention: Vaccination

Clinical Info

TPRs

	T	P	R
Camel	36-40	30-57	7-80 (T dep)
Cow	37.8-39.2	55-80	10-30
Dog	38.5	70-160	10-30
Cat	38.5	160-240	20-30

Dog Anaesthetics

- Alpha-2 R agonists (xylazine, medetomidine)
- Ketamine
- Propofol
- Gas (iso/halothane/ sevoflurane)

Vaccinations

- Cats and dogs need **annual** FVRCP + Rabies, and DHPPiL + Rabies.
- It is mandatory to be **microchipped** and **registered** with the municipality.
- For puppies and kittens, we **start at 8 - 9 weeks** and **repeat at least 12 weeks**.
- The **rabies** vaccine must be given **after 12 weeks** of age.