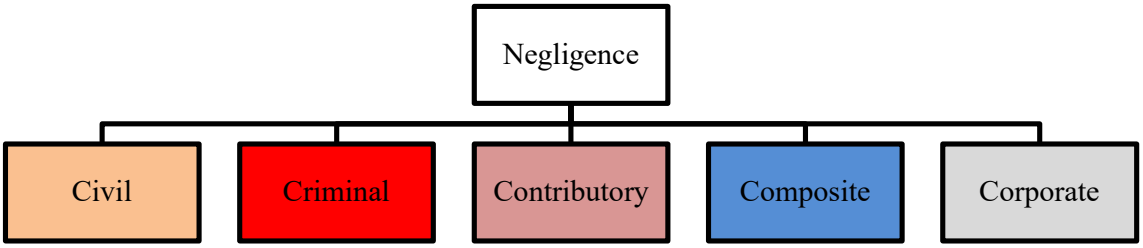
## I. Essay: (2 x 15 = 30)

### 1. Define Malpraxis. Discuss the proof of medical negligence and the defences available for a medical practitioner in a case of negligence.

**Definition of Malpraxis**

Absence of reasonable care/skill or Willful negligence of medical practitioner resulted in Bodily injury or death of patient. It may be due to act of omission or act of commission. Act of omission is failing to do something that one is supposed to do. Act of commission is doing something that one is not supposed to do.

Negligence is of different types




**a) Civil Negligence -** Negligent act done by doctor, causing damage to the patient. Civil negligence arises when a patient or relative brings suit in civil court for getting compensation from doctor. Here damages can be compensated by money. There is no criminal element so, it does not come under the purview of BNS. Examples are failure to examine patient, failure to obtain consent.

**b) Criminal Negligence -** Criminal negligence arises when doctor shows Gross absence of skill and care leading to injury or death of patient or doctor performs an illegal act. It is charged under Sec. 106 BNS deals with negligent act causing death. Doctor is liable to pay compensation, imprisonment and cancellation of license. Examples are conducting wrong surgery, performing criminal abortion

**c) Contributory Negligence -** Negligence is due to actions of doctor and patient, both.
Examples are failure to give accurate history, refusal to take treatment

**d) Composite Negligence -** Negligence is due to actions of many healthcare professionals without negligence of patient. Examples are treating a patient with multiorgan disorder by more than one doctors, resulted in negligence.

**e) Corporate Negligence -** Negligence is an outcome of error of hospital by Wrongful practices put in place or Wrongful hiring practices.

Examples are appointing incompetent doctors, providing defective equipment or drugs.

## Proof of Medical Negligence

To establish medical negligence, the plaintiff must prove the following four essentials:

1. **Duty of Care -** Existence of doctor–patient relationship

   Once a doctor agrees to treat, duty of care is established
2. **Dereliction of Duty -** Failure to exercise reasonable care, skill, or competence

   Judged by the Bolam test: Whether the doctor acted in accordance with a practice accepted as proper by a responsible body of medical professionals.
3. **Direct Causation -** Breach of duty must be the direct cause of injury or death.

   Without doctor's action, injury would not occur.
4. **Damage or Injury**

   Damage happened due to either act of omission or act of commission of doctor.

If these 4 elements are proved, then only prosecution can prove that doctor is negligent.

Exception to these elements to prove negligence are

a) **The doctrine of Res Ipsa Loquitur –** patient not need to prove negligence in this case. Example is failure to remove the swab. here 'the thing speaks for itself'. Conditions to be satisfied are injury would not have occurred ordinarily and doctor had exclusive control over injury or instrument.

b) **The doctrine of common knowledge –** here patient only need to prove negligent action, but not need to produce evidence to establish standard of care.

## Defences Available to Medical Practitioner

1. **No duty owed**
2. **No Negligence -** Reasonable care and skill exercised, Accepted medical practice followed
3. **Error of Judgment -** An error without negligence is not punishable
4. **Informed Consent -** Proper written consent obtained after explaining risks.
5. **Therapeutic misadventure –** unexpected events happened even after proper care
6. **Contributory Negligence -** Patient's own negligence contributed to injury
7. **Calculated risk doctrine –** unavoidable events happened even after proper care
8. **Res judicata –** if the court already gave verdict, patient cannot raise it again second time.
9. **Res indicate -** Complaint should be filed within 2 years limit.

## 2. A 40 year male farmer brought to the emergency department with history of restlessness, difficulty in breathing, muscle twitching and drooling of saliva. On examination patient is dyspnoeic, both pupils constricted and extensive crepitation noted over both lung fields.

### a) What is your provisional diagnosis?

a) He is a farmer. So there is a chance of Agricultural poisoning or snake bite.

b) Symptoms like Restlessness, difficulty in breathing, muscle twitching and drooling of saliva are Muscarinic & Nicotinic symptoms.

c) Signs like both pupils constricted and extensive crepitation noted over both lung fields are also seen in Organophosphorus poisoning

So provisional diagnosis is Organophosphorus poisoning

### b) Explain the various clinical manifestations of the underlying poison.

**Mechanism of Action**

Organophosphorus binds with enzyme **acetylcholinesterase and inactivates by phosphorylation and results in accumulation of acetylcholine.**

| Muscarinic Effects | Nicotinic | Central Nervous System Effects |
|---|---|---|
| **(DUMBBELSS)**<br>• **D**iarrhoea<br>• **U**rination<br>• **M**iosis<br>• **B**ronchospasm<br>• **B**radycardia<br>• **E**mesis<br>• **L**acrimation<br>• **S**weating<br>• **S**alivation | • Mydriasis<br>• Hypertension<br>• Fasciculation<br>• Tachycardia<br>• weakness | • Anxiety, restlessness<br>• Confusion<br>• Convulsions<br>• Drowsiness<br>• Ataxia<br>• cardio-respiratory depression<br>• Coma |

**Types of paralysis**

| Type | Name | Onset | Clinical features | Recovery |
|---|---|---|---|---|
| **Type I** | Acute cholinergic paralysis | Minutes–hours | a) Muscle fasciculations<br>b) Weakness progressing to flaccid paralysis<br>c) Respiratory muscle paralysis → respiratory failure | Reversible with atropine & pralidoxime |
| **Type II** | Intermediate syndrome | 24–96 hours | a) Difficulty lifting head<br>b) Proximal limb weakness<br>c) Respiratory failure | 4–18 days |
| **Type III** | Organophosphate-Induced Delayed Neuropathy | 1–3 weeks | a) Distal muscle weakness<br>b) Foot drop, wrist drop<br>c) Spastic paraparesis | Often incomplete. May result in permanent disability |

**c) Discuss in detail about treatment and post-mortem findings.**

## Management

**Investigation**

RBC cholinesterase level is less than 50% of normal value indicates poisoning (Normal: 70-140).

RBC cholinesterase is more accurate than plasma cholinesterase with respect to clinical correlation.

## Treatment

1. **Decontamination -** Remove contaminated clothes, Wash skin thoroughly
2. **Gastric lavage** with potassium permanganate (1:5000) and Activated charcoal
3. **Drug management**

**a) Atropine**: Counteracts muscarinic effects., not nicotinic effects

Give 2-4 mg IV.

Repeat every 5-10 min

Repeat till bronchial secretions cleared

**b) Pharmacological antidote - Diacetyl monoxime (DAM), Pralidoxime (2-PAM)**:

Reactivates acetylcholinesterase. It decreases muscarinic, nicotinic effects and CNS symptoms.

Give 1-2 gm IV.

Repeat in 1 hour

Repeat at 6-12 hours intervals for 24-48 hours till symptoms subside.

**4. Supportive Treatment**

- Oxygen therapy
- Mechanical ventilation if required
- Diazepam for convulsions
- Antibiotics

## Post-mortem Findings

| External | Internal |
|---|---|
| a) Froth at mouth and nostrils<br>b) Cyanosis of lips and fingers<br>c) Smell of kerosene / garlic | **a) Pulmonary edema and congestion**<br>**b) Congested brain**<br>**c) Congested viscera**<br>d) **Gastric mucosal congestion and submucosal hemorrhages with Smell of kerosene / garlic** |

- **Samples to be collected**
  - I. Stomach with contents & 30 cm of small intestine
  - II. 500 gms of liver & Half of each kidneys
  - III. 30 ml of blood
- **Chemical analysis**

  Detects Organophosphorus compounds