**Plant Responses**:

Ch. 39

Light:

Etiolation:

De-etiolation:

Receptor:

Secondary messengers:

Reception:

Transduction:

Response:

Hormones:

Auxin: (Fig 39.8) (IAA)

Cytokine:

Control of apical dominance

Gibberellins:

(Fig 39.11)

Abscisic acid: (ABA)

Ethylene:

Triple response:

Apoptosis:

Leaf abscission:

fruit ripening:

**Response to light**:

Light:

Photomorphogenesis:

Blue-light photoreceptors:

Three pigments:

cryprochromes

phototropin:

zeaxanthin:

Phytochromes:

Seed germination:

Shade avoidance:

Circadian rhythm:

**Response to seasons**:

Photoperiod:

Phototropism:

Short-day plant:

Long-day plant:

Day-neutral plant:

**Response to gravity**:

Gravitropism:

positive:

negative:

Statoliths:

**Response to mechanical stimuli**:

Thigmomorphogenesis:

Thigmotropism:

Fig 39.27

*Mimosa pudica*:

Motor organs:

**Response to environmental stress**:

Drought:

Flood:

Salt stress:

Heat-shock protein:

Cold stress:

**Plant defense**:

**Herbivore**:

**Pathogen**:

Virulent:

Avirulent:

Gene-for-gene recognition: (Fig 39.30)

R gene:

Avr gene:

Non-specific response: (Fig 39.31)

Oligosacchrins:

Elicitors:

Phytoalexins:

PR-proteins:

Systemic Acquired Resistance: SAR

Gravitropism

