1. **Maintenance practices for a disc plough.**
   - Cleaning after use
   - Greasing the moving parts
   - Painting the frame
   - Repair/replace broken/worn out parts
   - Oiling the metal parts on long storage
   - Proper storage

2. **Selection of breeding stock.**
   - Progeny testing
   - Mass selection
   - Contemporary comparison

3. **Advantages of using animal power,**
   - Animals are cheap to acquire
   - Require less skilled labour
   - Can be used on small holdings
   - Are appropriate in very steep areas

4. (a) Blue ticks - Anaplasmosis
   (b) Brown ear ticks - E.C.F
   (c) Tsetse flies - Trypanosomiasis (nagana)

5. **Control methods for roundworms.**
   - Use of antibelmintics
   - Rotational grazing
   - Proper disposal of faeces/hygiene
   - Ploughing/burning of pasture

6. (a) Disease
   Any deviation or alteration in the state of animal body or its organs/Which interferes with proper performance of its functions
   (b) Vaccination: Is the administration of a weakened or killed disease causing agent into the animal to induce production antibodies for immunity against the disease.

7. **Maintenance practices for a battery.**
   - Topping with distilled water to maintain correct level of electrolyte
   - Cleaning the terminals and smearing them with grease to prevent corrosion
   - Tightly fix the battery in a box to prevent spillage and damages
   - Regular charging
   - Empty contents and turn it upside down on long storage
   - Should be fitted correctly on the tractor

8.
Breed     Type
a)  Aberdeen  Beef
b)  Guernsey  Dairy
c)  Sahiwal    Dual purpose
d)  Red poll   Dual purpose

9. **Proper nutrition**
   - Prevents nutrient deficiency diseases.
   - Ensures resistance against disease infection.

10. **Categories of livestock diseases**
    - Bacterial
    - Protozoan
    - Viral
    - Nutritional

11. Upgrading
    Cross breeding.

12. **Bloodless castration methods.**
    Use of rubber ring and elastrator
    Use of burdizzo.

13. a) **Recessive gene:** An allele whose phenotypic expression is masked by a dominant allele in heterozygous condition,
    b) **Epistasis:** Gene interaction in which the expression of some alleles is blocked. (masked)

14. **Signs of kindling in a doe.**
    - Lose of appetite
    - Restlessness.
    - Nest building
    - Plucking of fur from the belly

15. **Developmental stages of liver flukes in a fresh water snail.**
    - Sporocyst
    - Cercaria
    - Redia.

16. **Four strokes of a tractor engine.**
    - induction/intake
    - compression
    - power/ignition
    - exhaust

17. **Signs of mite attack in poultry.**
    - Irritation/scratching of the body.
    - Anaemia.
- Presence of mites below the plumage in patches.
- Falling off of feathers.
- Dermatitis due to burrowing effects.
- Formation of crusts.

18. **Advantages of natural feeding in calf rearing.**
- Calf takes milk at body temperature
- Milk is free from contamination
- It prevents scouring in calves.
- Milk is provided ad libitum.

SECTION B (20 marks)

19.

20. (a) Dromedary/(Camelus dromedarius)
(b) - Milk
   - Meat
   - Transport services
   - Hides
(c) - Withstands/resists high temperature.
   - Can stay for a long time without food water.
   - Can resist tropical diseases.
   - Can survive on poor pastures.
   - Can walk long distances in search of food and water.
   - Has long eye lashes that prevent
   - Has long nose flaps that prevent

21. (a) J — watering can.
   K — milk churn/milk can.
   M — Mason's Trowel.
(b) K — temporary storage of milk/holding milk during transportation
    L — driving nails into wood/removing nails from wood.
(c) - cleaning after use.
- painting with aluminium paint to prevent rusting.
- repair/replace broken/worn out parts.

22.
   a) Dry cow therapy
   b) At the end of drying off.
   c) teat dipping
      complete milking
      proper milking technique
      applying milking jelly after milking.

23. (a)  
   N —
   P — Rumen
   Q — Gail bladder
   (b)  
   S — Digestion/absorption of food
   T — Absorption of water.
   (c)  
   R — Lipase/Trypsin/amylase
   S — Peptidase/maltase/sucrase (invertase)/lactase

SECTION C

24. Factors considered when culling livestock.
   - Cull livestock of:
   - Poor health;
   - Old age;
   - Physical deformities;
   - Hereditary defects;
   - Infertility;
   - Poor mothering ability;
   - Poor quality products;
   - Low production;
   - Bad temperament.
   - To avoid inbreeding

(b) Description of poultry management under:

   (i) Cause of stress.
   - Any sudden change in routine
   - Parasite infestations
   - Lack of food and water
   - Strangers and predators in the birds' house,
   - Sudden noise such as passing tractors and thunder.
   - Poor handling of birds during routine practices.
   - Overcrowding which leads to competition for space.
   - Climatic changes
   - Poor lighting in poultry house.
   - Inadequate laying nests.
Disease outbreak

(ii) Control measures for cannibalism:
- Control external parasites.
- Keep birds busy by hanging green leaves or vegetables in the house.
- Feed the birds on a balanced diet.
- Provide adequate floor space.
- Provide adequate laying nests.
- Provide dim lights in the brooder.
- Keep birds as per the age group.
- Debeak hens which peck others.
- Cull perpetual cannibals

25.

a) Feeding Dairy Calf:
- Train the calf to feed from a bucket (bucket feeding).
- Ensure the calf suckles the cow within the first eight hours to get colostrums.
- Feed the calf on colostrum for the first 4 days.
- Introduce the feeding of whole milk or milk substitutes after the fourth day.
- Feed the calf 2-3 times per day for the first 4 weeks.
- Feed the calf on the correct amount of milk up to weaning time.
- Provide adequate clean water from the third week.
- Feed the calf with warm milk at regular intervals.
- Introduce palatable dry feeds such as concentrates (calf pellets) and good quality cut grass from the third week.
- Provide mineral supplements or licks.
- Any change in feeding should be done gradually to avoid nutritional disorders

b) Newcastle disease.
- Casual organisms.
- Virus.

(ii) Signs of attack:
- Difficult in breathing.
- Beaks remain wide open and necks are strained.
- Dullness.
- Birds stand with eyes closed all the time.
- Loss of appetite.
- Nasal discharge which force the birds to shake their heads to clear it.
- Birds walk in a staggering motion since the nervous system is affected.
- Often the bird have their heads and wings drooping.
- Birds produce watery greenish diarrhea.
- Eggs laid have soft shells.

(iii) Control Measures:
- Vaccination during the first six weeks and then two to three months later.
- Quarantine.
- Kill the infected birds and burn them.
- Obtain stock from reputable source

(a) **Use of fences in the farm!**
- Mark boundaries.
- Help to avoid boundary dispute
- Keep off wild animals and intruders from outside the farm/ security
- Enable the farmer to practice mixed farming.
- Facilitates rotational grazing
- Controls movement of animals and people preventing formation of unnecessary paths in the farm.
- Control the spread of parasites and diseases by keeping off wild and stray animals from the farm
- Help the farmer to isolate or confine animals requiring special attention.
- Enable the farmer to control breeding by rearing different animals in different paddocks.
- Hedges act as wind breakers.
- Adds beauty to the farm.
- Add value.
- For privacy.

(b) **Harmful effects of liver flukes in sheep**
- Digestive upsets due to blocking of bile duct.
- Emaciation/ recumbency leading to death
- Anaemia due to ducking to blood
- Swollen lower jaw/ oedema in the jaw
- Swollen abdomen
- Destruction of old tissues

(c) **Differences between Petrol and Diesel Engine**

<table>
<thead>
<tr>
<th>Diesel Engine</th>
<th>Petrol Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use diesel</td>
<td>Uses petrol</td>
</tr>
<tr>
<td>Ignited by compression</td>
<td>Ignited by spark plugs</td>
</tr>
<tr>
<td>Compression ratio is high</td>
<td>Compression ratio is low</td>
</tr>
<tr>
<td>Less efficient in fuel burning</td>
<td>More efficient in fuel burning</td>
</tr>
<tr>
<td>Only air is compressed</td>
<td>Air – fuel mixture is compressed</td>
</tr>
<tr>
<td>Has injector pump</td>
<td>Has a carurator</td>
</tr>
</tbody>
</table>