

4.16.2 Agriculture Paper 2 (443/2)

SECTION A (30 marks)

1.	<ul style="list-style-type: none"> <li>a) – Guernsey</li> <li>- Friesian</li> <li>- Ayrshires</li> <li>- Jersey;</li> </ul> <p style="text-align: right;"><b>(1 x <input type="checkbox"/> mark)</b></p>	<b>(<input type="checkbox"/> mark)</b>
	<ul style="list-style-type: none"> <li>b) - Sahiwal;</li> <li>- Red poll;</li> <li>- Simmental;</li> </ul> <p style="text-align: right;"><b>(1 x <input type="checkbox"/> mark)</b></p>	<b>(<input type="checkbox"/> mark)</b>
	<ul style="list-style-type: none"> <li>c) - Romney mash;</li> <li>- Carridale;</li> <li>- Hampshire Down;</li> </ul> <p style="text-align: right;"><b>(1 x <input type="checkbox"/> mark)</b></p>	<b>(<input type="checkbox"/> mark)</b>
	<ul style="list-style-type: none"> <li>d) Angora;</li> </ul>	<b>(<input type="checkbox"/> mark)</b>
2.	<ul style="list-style-type: none"> <li>- Blood spots;</li> <li>- Hair cracks;</li> <li>- Excessively porous shell;</li> <li>- Fertilized eggs;</li> <li>- Small size of air space;</li> <li>- Meat sports;</li> </ul> <p style="text-align: right;"><b>(4 x <input type="checkbox"/> mark)</b></p>	<b>(2 marks)</b>
3.	<ul style="list-style-type: none"> <li>- Expand inherited potential of the animal;</li> <li>- Increase productivity;</li> <li>- Environmental adaptability;</li> <li>- Satisfy consumers' tastes;</li> <li>- For increased growth rates for early maturity;</li> </ul> <p style="text-align: right;"><b>(4 x <input type="checkbox"/> mark)</b></p>	<b>(2 marks)</b>
4.	<ul style="list-style-type: none"> <li>- Prevent lameness;</li> <li>- Control foot rot disease;</li> <li>- Prevent injury during mating;</li> </ul> <p style="text-align: right;"><b>(2 x <input type="checkbox"/> mark)</b></p>	<b>(1 mark)</b>
5.	<ul style="list-style-type: none"> <li>- Swollen underside of the body;</li> <li>- Fever;</li> <li>- Blood stained faeces and milk;</li> <li>- Tar like watery blood discharge from orifices;</li> <li>- Lack of <i>rigor mortis</i> in carcass;</li> <li>- Blood does not clot quickly;</li> </ul> <p style="text-align: right;"><b>(4 x <input type="checkbox"/> mark)</b></p>	<b>(2 marks)</b>

6.	<ul style="list-style-type: none"> <li>- Use of dehorning wire/saw;</li> <li>- Use caustic potash stick (Potassium hydroxide);</li> <li>- Use of disbudding iron;</li> <li>- Use of rubber ring and elastrator;</li> <li>- Use of dehorning collodion;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
7.	<ul style="list-style-type: none"> <li>- Healthy animals grow fast and reach maturity early;</li> <li>- Provide a long economic and productive life;</li> <li>- To maximize production/performance;</li> <li>- To produce good quality products;</li> <li>- To prevent spread of diseases;</li> <li>- Healthy animals are economical and easy to keep;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
8.	<ul style="list-style-type: none"> <li>- Free from contagious diseases;</li> <li>- Physically clean;</li> <li>- Wears white overall when milking and handling milk;</li> <li>- Short finger nails;</li> <li>- Covered hair;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
9.	<ul style="list-style-type: none"> <li>- Straighten loose or sagging wires using a wire strainer;</li> <li>- Broken wires should be spliced;</li> <li>- Worn out posts should be replaced;</li> <li>- Broken brace posts and droppers should be replaced;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
10.	<ul style="list-style-type: none"> <li>- Produce high quality carcass;</li> <li>- Is highly prolific;</li> <li>- Grows fast and matures early;</li> <li>- Adapted to hot and dry areas;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
11.	<ul style="list-style-type: none"> <li>- Bush clearing to destroy breeding grounds;</li> <li>- Spraying breeding grounds with insecticides;</li> <li>- Use of fly trap impregnated nets;</li> <li>- Sterilization;</li> </ul>	<b>(4 x <input type="checkbox"/> mark)</b>	(2 marks)
12.	<ul style="list-style-type: none"> <li>a) Using clinical/veterinary thermometer inserted in the rectum;</li> <li>b) Using a respirometer; observing and counting the rate of inspiration/expiration per minute;</li> <li>c) Place a finger of thumb on an artery passing on a bone or on the lower edge of the animal jaw;</li> </ul>		( <input type="checkbox"/> mark)
			( <input type="checkbox"/> mark)
13.	a) 270 – 285 days;		( <input type="checkbox"/> mark)
	b) 113 – 117 days;		( <input type="checkbox"/> mark)
	c) 150 days;		( <input type="checkbox"/> mark)
	d) 28 – 32 days;		( <input type="checkbox"/> mark)

14.	<ul style="list-style-type: none"> <li>- Long and large;</li> <li>- White with blue body spots;</li> <li>- Broad and dished snout;</li> <li>- Upright ears;</li> </ul>	<b>(4 x □ mark)</b>	(2 marks)
15.	<ul style="list-style-type: none"> <li>- Feed the queen, drones and brood;</li> <li>- Protect the hive from intruders;</li> <li>- Collect nectar, pollen, tree nashis, gums, water etc;</li> <li>- Build combs;</li> <li>- Seal cracks and crevices on the hive;</li> <li>- Clean the hive;</li> <li>- Make honey and bees wax;</li> </ul>	<b>(4 x □ mark)</b>	(2 marks)
16.	<ul style="list-style-type: none"> <li>- Open method/surgical method;;</li> <li>- Implanting pellets of female sex hormone beneath the skin of the bird;</li> <li>- Injecting with stilbestrol hormone when they are one day old;</li> </ul>	<b>(3 x □ mark)</b>	(1□ mark)

**SECTION B (20 marks)**

17.	<ul style="list-style-type: none"> <li>a) <b>E</b> – open ended spanner;</li> <li><b>H</b> – Steel float;</li> </ul>		(1 mark)
	<ul style="list-style-type: none"> <li>b) <b>F</b> – Loosening and tightening specific sized nuts and bolts;</li> <li><b>G</b> – Digging and collecting manure/trash;</li> </ul>		(1 mark)
	<ul style="list-style-type: none"> <li>c) <b>F</b> – provides a more firm grip on nuts and bolts;</li> <li>– can work on nuts/bolts in depressions;</li> </ul>		(1 mark)
18.	<ul style="list-style-type: none"> <li>a) Tick;</li> </ul>		(1 mark)
	<ul style="list-style-type: none"> <li>b) – Larvae;</li> <li>-Nymph;</li> </ul>	<b>(2 x □ mark)</b>	(1 mark)
	<ul style="list-style-type: none"> <li>c) – East Coast fever;</li> <li>-<i>Anaplasmosis</i>;</li> <li>-Heart water;</li> </ul>	<b>(2 x □ mark)</b>	(1 mark)
	<ul style="list-style-type: none"> <li>d) -Ploughing pastures;</li> <li>-Burning pastures;</li> <li>-Top dressing using lime or acaricides;</li> </ul>	<b>(2 x 1 mark)</b>	(2 marks)
19.	<ul style="list-style-type: none"> <li>a) <b>J</b> – Inlet;</li> <li><b>K</b> – Spillway / overflow pipe;</li> </ul>		(1 mark)
	<ul style="list-style-type: none"> <li>b) Drain the pond during harvesting/cropping;</li> </ul>		(1 mark)
	<ul style="list-style-type: none"> <li>c) Provide breeding ground for fish;</li> </ul>		(1 mark)

	d) The container with fingerlings is gradually lowered into the pond and tilted for the fingerlings to swim away;	(1 mark)
20.	a) <b>M</b> – Normal presentation; <b>N</b> – Breech/mal-presentation;	(1 mark) (1 mark)
	b) <b>N</b> - Breech presentation;	(1 mark)
	c) - Enlarged and swollen; -Clear mucus discharge;(2 x 1 mark)	(2 marks)

**SECTION C (40 marks)**

21.	a) - Combs and wattles are large, warm, waxy and red; - Bright orange and alert eyes; - Pale beak; - Oral, moist and reddish vent; - Soft, pliable and wide abdomen; - Space between the keel & pelvic bone is wide i.e. fits 3 -4 fingers; - Alert and active in temperament; - Dry and rugged plumages; - Late moulting; - Pale shanks; - Broodiness is rare;  <b>(10 x 1 mark)</b>	(10 marks)
	b) (i) - milking materials and equipment should be availed and within reach of milkman; - Put the cow in the milking palour; - Restrain the cow; - Give food; - Wash the udder and dry it with separation towels; - Check for mastitis infection;  <b>(4 x 1 mark)</b>	(5 marks)
	ii. - Tightly grasp the teat at its base between the thumb and forefinger; to prevent back flow of milk into the gland cistern; - Close in the other three fingers; applying pressure from top to bottom; to force the teat's orifice open and drain milk out of the teat; <b>(5 x 1 mark)</b>	(5 marks)
22.	a) (i) <i>Brucella abortus</i> ; bacteria;  <b>(1 x 1 mark)</b>	(1 mark)
	(ii) - Premature birth occurs; - Retained placenta; - Infertility; - Inflamed tests with low libido in bulls; - Yellowish, brown slimy odourless discharge from the vulva at abortion;  <b>(4 x 1 mark)</b>	(4 marks)

	<p>iii.</p> <ul style="list-style-type: none"> <li>- Uses of A.I;</li> <li>- Culling/slaughter affected animals;</li> <li>- Vaccination;</li> <li>- Stockman should avoid contact with aborted foetus;</li> <li>- Blood test on all breeding animals to detect infected ones;</li> <li>- Proper hygiene;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)
	<p>b)</p> <ul style="list-style-type: none"> <li>- Chemical composition of the food;</li> <li>- Form in which the feed is offered to the animal;</li> <li>- Species of the animal;</li> <li>- Ratio of energy to protein;</li> <li>- Quantity of food already present in the digestive system of the animal;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)
	<p>c)</p> <ul style="list-style-type: none"> <li>- Litter on the floor; for insulation and absorption of moisture;</li> <li>- Fresh air circulation; should have holes on the wall for ventilation/ gaseous exchange;</li> <li>- Heat source; should be provided to maintain correct temperatures;</li> <li>- Feeders and waterers; should be adequate to prevent overcrowding;</li> <li>- Shape of the brooder should be round to prevent overcrowding that leads to suffocation;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)
23.	<p>a)</p> <ul style="list-style-type: none"> <li>- Anaemia;</li> <li>- Irritation;</li> <li>- Emaciation;</li> <li>- Poor feeding;</li> <li>- Loss of hair;</li> <li>- Wounds/scratches on the skin;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)
	<p>b)</p> <ul style="list-style-type: none"> <li>- Vermin proof to keep away rats;</li> <li>- Well ventilated to avoid dampness in the store;</li> <li>- Water/leak proof to prevent dampness in the store;</li> <li>- Easy to clean – free from cracks and crevices which harbor pests;</li> <li>- Constructed above the ground to prevent dampness;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)

	<p>c)</p> <ul style="list-style-type: none"> <li>- Lubricate the water pump regularly;</li> <li>- Use clean water in the radiator;</li> <li>- Remove trash from the fins;</li> <li>- Ensure all pipes are tightly fitted to avoid leakage;</li> <li>- Fill the radiator with clean water before each day's work;</li> <li>- Check the fan belt tension regularly and adjust accordingly;</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	(5 marks)				
d)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left; padding: 5px;"><b>Diesel</b></th> <th style="width: 50%; text-align: left; padding: 5px;"><b>Petrol</b></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>- Uses diesel fuel</li> <li>- Has injection pump</li> <li>- Fuel &amp; air mixed within the cylinder</li> <li>- Fuel ignited by compression of air-fuel mixture</li> <li>- Produces a lot of smoke</li> <li>- Heavy in weight and suited for heavy duties</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p> </td> <td style="padding: 5px;"> <ul style="list-style-type: none"> <li>- Uses petrol;</li> <li>- Has a carburetor;</li> <li>- Mixed in the carburetor before it gets into engine</li> <li>- Ignited by an electric spark;</li> <li>- Produces less smoke;</li> <li>- Light and suited for light duties;</li> </ul> </td> </tr> </tbody> </table>	<b>Diesel</b>	<b>Petrol</b>	<ul style="list-style-type: none"> <li>- Uses diesel fuel</li> <li>- Has injection pump</li> <li>- Fuel &amp; air mixed within the cylinder</li> <li>- Fuel ignited by compression of air-fuel mixture</li> <li>- Produces a lot of smoke</li> <li>- Heavy in weight and suited for heavy duties</li> </ul> <p style="text-align: right;"><b>(5 x 1 mark)</b></p>	<ul style="list-style-type: none"> <li>- Uses petrol;</li> <li>- Has a carburetor;</li> <li>- Mixed in the carburetor before it gets into engine</li> <li>- Ignited by an electric spark;</li> <li>- Produces less smoke;</li> <li>- Light and suited for light duties;</li> </ul>	(5 marks)
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