2024 Batch: Lecture No. 1

Question 1: Define Obstetrics.

1. Veterinary Obstetrics has in past been defined as that branch of Surgery dealing with the oversight of the female animal during pregnancy and parturition. However with our increased knowledge of genital diseases of female and male animals, the study of veterinary obstetrics has expanded to include that highly important field.

Question 2: What is term Theriogenology?

2. Theriogenology is the term introduced by Bartlett and co-workers to include all aspects of veterinary obstetrice, genital diseases and reproduction.
3. Therio and Gen are the greek words which means Therio-Animals or beast and Gen-Coming into being.

Question 3: What is importance of studying Veterinary Obstetrics and Genital Diseases?

4. The livestock industry depends upon reproduction.
5. Any disease or pathological conditions causing sterility or infertility in our domestic animals, whether it be a sporadic or enzootic condition, must be of concern of veterinary practitioner.
6. The recent introduction and rapid growth of artificial insemination, and its inherent problems require the modern veterinarian, especially in cattle practice, to be well acquainted with the field of obstetrics.
7. The field of reproductive physiology, endocrinology, nutrition, genetics, embryology, teratology, anatomy, virology, bacteriology, pathology, surgery and medicine, all supply important necessary link in our chain of obstetrical knowledge.
8. In the broad field of veterinary Obstetrics and genital diseases, as in any clinical field of study, the advances made in the basic sciences must be studied, considered and applied.
9. 85 to 90 % of animals treated are dairy cattle, and about 25 to 30 percent of the cases treated were obstetrical or dealt with the reproductive system.
10. These include such common conditions as Dystocia, Retained Placenta, Pregnancy examination, Sterility examination, sterility treatment, abortion, metritis, blood testing, vaccinating for brucellosis and other abortion diseases and treatment of many other genital conditions.
11. The volume of obstetrical work in a large animal or small animal practice is considerable.
12. One must realize that the average laymen or farmer places an undue amount of importance and significance on the successful handling of obstetrical cases and breeding problems.
13. The young or inexperienced veterinarian may make or ruin his chances for success with a certain farmer or in a certain territory by the way in which he handles a single obstetrical case.

The Female Genital Anatomy and Embryology

Q.4: What is important in Obstetrics?

14. The bony and ligamentous structures comprising the pelvis are of particular interest in obstetrics.

Q.5: What is bony pelvis composed of?

15. The bony pelvis is composed of sacrum, and first to third coccygeal vertebrae, two os coxae, each formed by the ilium, ischium and pubis.

Q.6: What are characteristics of Sacrum?

16. It is composed of five fused vertebrae in the cow.

17. It is somewhat triangular in form with the base articulating cranially with the last lumbar vertebra and caudally with the first coccygeal vertebra.

18. The ventral face of the sacrum is smooth and concave.

19. The dorsal surface of the sacrum is smooth and concave.

20. The wing of the sacrum articulates with the ilium laterally.

21. In older animals the first coccygeal vertebra may fuse with the sacrum in horse, cow and pig.

Q. 7: What are characteristics of ilium?

22. It is irregularly triangular in shape.

23. The broad, flat, dorsal part of the ilium is called the wing.

24. The medial portion of the wing is called tuber sacrale and its ventral medial aspect articulates with the sacrum.

25. The external portion of the wing of the ilium is called the tuber coxae, hip bone or hook bone.

26. Dorsally the wing of the ilium in the horse, cow, sheep and pig is concave, providing attachment for the gluteal and back muscles.

27. Ventrally the wing is convex.

28. In the dog and cat, the wing of the ilium is rotated laterally so it lies nearly parallel to spinal column.

29. The narrow ventral part of the ilium is called the body or shaft and resembles the long bones of the body.

30. This bone fuses ventrally with the ischium and pubis at the acetabulum.

31. Its medial or pelvic surface is smooth and is grooved for the obturator vessels and nerves.

Q. 8: What are the characteristics of Ischium?

32. It forms caudal part of ventral floor of pelvis.

33. Its dorsal surface is smooth and rather concave.

34. The caudal border of the ischium slopes inward and forward to join with the opposite ischium to form the ischiatic arch.

35. The caudal lateral portion of these bones are called tuber ischii or pin bones.

36. The cranial border of the ischium forms the caudal margin of obturator foramen.

37. Dorsally the ischium bears the ischiatic spine cranial and caudal to which are the greater and lesser sciatic notches, respectively.

38. These notches become foramina when the sacro-sciatic ligament completes their boundary.

39. Medially the ischial and pubic bones fuse to form the pelvic symphysis.

40. In the cow and ewe the portion of the pelvic floor formed by two Ischia is deeply concave from side to side.

Q. 9: What are the characteristics of Pubis?

41. It is the smallest of three bones of the os coxae.

42. It forms cranial portion of the pelvic floor.

43. The dorsal or pelvic surface is smooth and usually concave in female while in males it may be convex.

44. Occasionally in the young cow a sharp tuberosity projecting into the pelvic canal is present on the cranial portion of the pubic symphysis. This prominence may rarely cause contusion or even laceration of the birth canal during a difficult birth.
45. The cranial medial border of the pubic bone provides attachment for the pre-pubic tendon.
46. The caudal border forms the cranial border of the obturator foramen.
Q.10: What is Acetabulum?
47. It is formed by the fusing of the ilium, ischium and pubis.
48. These bones form a cotyloid cavity lodging the head of the femur.
49. Acetabulum consists of articular and non-articular portions.
50. The acetabular notch is made into a foramen by the transverse ligament and transmits the accessory ligament to the head of the femur in the horse.
51. The round ligament is a short, strong band between the head of the femur and the acetabulum.