SECTION C: PREVIOUS YEARS' EXAMINATION QUESTION

1. Layers of ovum from outside to inside are **(2007)**

(A) Corona radiate, zona pellucid, vitelline membrane

(B)Zona pellucid, corona radiate, vitelline membrane

(C)Vetelline membrane, zona pellucid, corona radiate

(D)Zona pellucid, vitelline membrane, corona radiate

2. Which one functions as endocrine gland after ovulation? **(2007)**

(A)Stroma (B)Vitelline membrane

(C)Germinal epithelium **(D)**Graafian follicles

3. At the end of first meiotic division, male germ cell differentiates into **(2008)**

(A) Secondary spermatocyte

(B)Primary spermatocyte

(C)Spermatogonium

(D)Spermatid

4. Embryo at 16-celled stage is called **(2008)**

(A) Morula (B)Blastula

(C)Blastomere (D)Gastrula

5. Which is incorrect about menstruation? **(2008)**

(A)At menopause, there is abrupt increase gonadotropic hormones

(B)Beginning of cycle of menstruation is called menarche

(C)During normal menstruation about 40 mL of blood is lost

(D) Menstrual fluid can easily clot.

6. Which extra embryonic membrane in human prevents desiccation of embryo inside uterus? **(2008)**

(A)Yolk sac **(B)**Amnion

(C)Chorion (D)Allantois.

7. Which is the correct sequence in spermatogenesis? **(2009)**

(A)Spermatogonia → Spermatids → Secondary spermatocytes → Primary spermatocyte → Sperm

(B)Spermatogonia → Spermatids → Primary spermatocytes → Secondary spermatocytes → Sperms

(C)Primary spermatocytes → Secondary spermtocytes → Spermatids → Spermatogonia → Sperms

(D) Spermatogonia → Primary spermatocytes → Secondary spermatocytes → Spermatids → Spersm

8. Amount of yolk and its distribution are changed in the egg. Which one is affected? **(2009)**

(A) Pattern of cleavage (B)Formation of zygote

(C)Number of blastomeres (D)Fertilization

9. Reptile and bird eggs are **(2009)**

(A) Macrolecithal (B)Oligolecithal

(C)Mesolecithal (D)Alecithal

10. Which layer of embryo is formed first **(2009)**

(A)Ectoderm (B)Mesoderm

(C) Endoderm (D)Both B and C

11. Which is correctly matched? **(2009)**

(A)Menstruation : Breakdown of myometrium and ovum not fertilized

(B)Ovulation : LH and FSH attain peak level, sharp fall in secretion of progesterone

(C) Development of Corpus luteum : Secretory phase and increased secretion of progesterone

(D)Poliferative Phase : Rapid regeneration of myometrium and maturation of Graffian follicle

12. In a regularly cycling human female, which can be the root cause of menstrual failure? **(2009)**

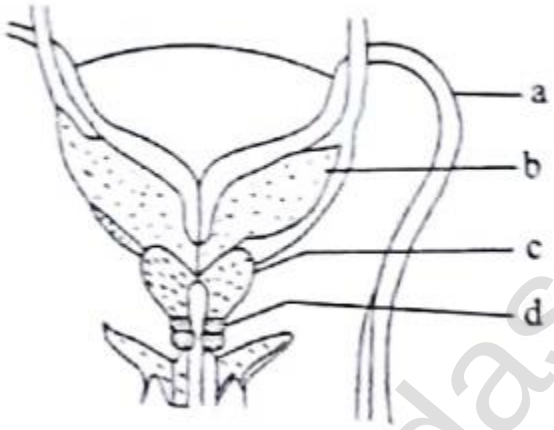
(A) Fertilisation of ovum

(B)Maintenance of hypertrophical endometrial lining

(C)Maintenance of high titre of sex hormones

(D)Retention of well-developed corpus luteum

13. Select the correct set of names for the parts A.B.C.D **(2009)**



(A)A — Ureter, B — Seminal vesicle, C — Prostate, D — Bulbourethral gland

(B)A — Ureter, B — Prostate, C — Seminal vesical, D — Bulbourethral gland

(C)A — Vas deferns, B — Seminal vesicle, C — Prostate, D — Bulbourethral gland

(D)A — Vas deferns, B — Seminal vesicle, C — Bulbourethral gland, D — Prostate

14. 32-celled state of human embryo is

(A)Smaller than fertilized egg

(B) Same size as fertilized egg

(C)Two times the size of fertilized egg

(D)Four times the fertilized egg.

15. In females, hormone inhibin is secreted by **(2009)**

(A) Granulosa cells and corpus luteum

(B)Granulosa and theca cells

(C)Granulosa and cumulus oophorus cells

(D)Granulosa cells and zona pellucid

16. Signals from the fully developed foetus and placenta ultimately lead to parturition which requires the release **(2010)**

(A)Estrogen from placenta

(B)Oxytocin from foetal pituitary

(C) Ovytocin from maternal pituitary

(D)Relaxin from placenta

17. In human female the blastocyst **(2010)**

(A) Gets implanted in endometrium by trophoblast cells

(B)Forms placenta even before implantation

(C)Gets implanted into uterus 3 days after ovulation

(D)Gets nutrition from uterine endometrial secretion only after implanation

18. Secretions from which one of the following is rich in fructose, calcium and some enzymes **(2010)**

(A) Male accessory glands

(B)Pancreas

(C)Liver

(D)Salivary glands

19. Which is correct about morula? **(2010)**

(A)Less cytoplasm and less DNA than zygote

(B)Same amount of cytoplasm and DNA as zygote

(C)More cytoplasm and more DNA than zygote

(D) Same amount of cytoplasm but much more DNA than zygote

20. Foetal movements and appearance of hair and head occur in ……. month of pregnancy. **(2010)**

(A) Fifth (B)Sixth

(C)Third (D)Second

21. Second maturation division of mammalian ovum occurs **(2010)**

(A) Until after sperm has penetrated ovum

(B)Until nuclei of sperm and ovum fuse

(C)In Graafian follicle soon after first maturation division

(D)Shortly after ovulation before entry in to fallopian tube

22. Vasa efferentia lead from

(A) Rete testis to vas deferens

(B)Vas deferens to epididymis

(C)Epididymis to urethra

(D)Testicular labules to rete testis

23. Which is correct about human sperm? **(2010)**

(A) Sperm lysins in acrosome dissolve egg envelope facilitating fertilization

(B)Acrosome serves as sensory structure leading sperm towards ovum

(C)Acrosome has no particular function

(D)Acrosome has conical tip for piercing and penetrating egg for fertilization

24. Part of fallopian tube closest to ovary is **(2010)**

(A) Infundibulum (B)Cervix

(C)Ampulla (D)Isthmus

25. Foetal ejection reflex in human female is induced by **(2010)**

(A)Release of oxytocin from pituitary

(B)Pressure exerted by amniotic fluid

(C)Differentiation of mammary glands

(D) Fully developed foetus and plancenta

26. Seminal plasma of humans is rich in **(2010)**

(A)Fructose and certain enzymes, poor in Ca^{2+}

(B) Fructose, Ca^{2+} and certain enzymes

(C)Fructose, Ca^{2+} but no enzymes

(D)Glucose, certain enzymes but no Ca^{2+}

27. What happens during fertilization when many sperms reach close to ovum? **(2011)**

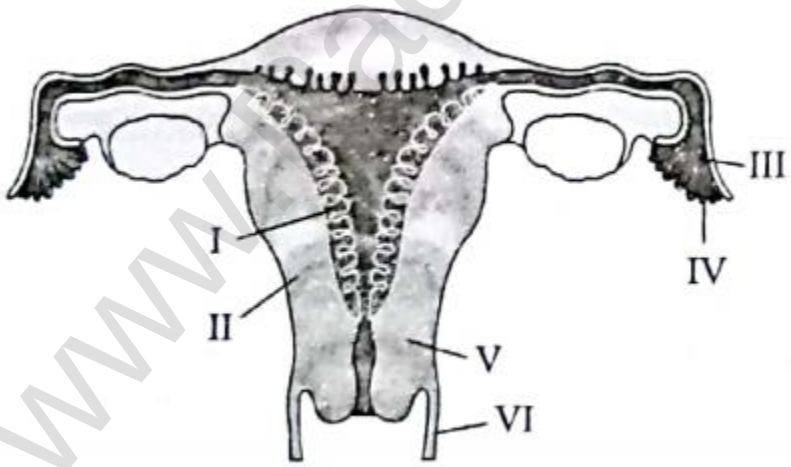
(A) Cells of corona radiate trap all the sperms except one

(B)Only two sperms nearest to oveum penetrate zona pellucid

(C)Secretion of acrosome helps one sperm enter cytoplasum of ovum through zona pellucid

(D)All sperms except the one nearest to ovum lose their tails

28. Identify the correct set of three parts. **(2011)**



(A)IV — oviducal funnel, V — Uterus, VI — Cervix

(B)I — Perimetrium, II — Myomertrium, III — Fallopian tube

(C)II — Endometrium, III — Infundibulum, IV — Fimbriae

(D)III — Infundibulum, IV — Fimbriae, V — Cervix

29. Which is correct? **(2011)**

(A) Humans show spontaneous ovulation

(B)Several enzymes occur in bile juice

(C)Monkeys, apes and humans have oestrus cycle

(D)Urine is pale yellow and slightly alkaline.

30. LH surge occurs during phase of menstrual cycle **(2011)**

(A)Menstrual phase

(B)Beginning of proliferative phase

(C)Just before end of proliferation phase

(D) At the middle of the cycle

31. Which is false about viability of mammalian sperm? **(2012)**

(A) Sperm is viable for only 24 hours

(B)Sperm viability is determined by its motility

(C)Sperm must be concentrated in thick suspension

(D)It depends upon pH of medium as sperm is more active in alkaline medium

32. Signals for parturition originate from **(2012)**

(A)Fully developed foetus only

(B)Placenta only

(C)Oxytocin released by maternal pituitary

(D) Both A and B

33. Relaxin is produced by **(2012)**

(A) Ovary (B)Testis

(C)Adrenal (D)Pituitary gland

34. Identify development stage and place of occurrence. **(2012)**

(A) Blastocyst, uterine wall

(B)8-celled morula, starting point of fallopian tube

(C)Late morula, middle part of fallopian tube

(D)Blastula, end part of fallopian tube

35. Secretory phase of human menstrual cycle is also called **(2012)**

(A)Luteal phase and lasts for 6 days

(B) Luteal phase and losts for 13 days

(C)Follicular phase and lasts for 13 days

(D)Follicular phase and lasts for 6 days

36. Role of Leydig cells is **(2012)**

(A)Nourishment of sperms

(B)Provide motility to sperms

(C)Bring about maturation of sperms

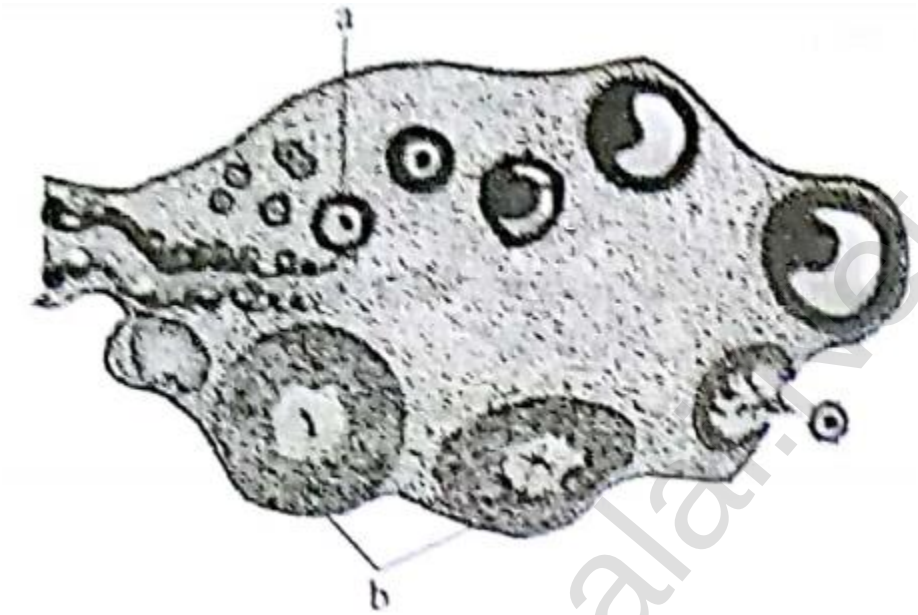
(D) Synthesis of testosterone/Androgens

37. Right ovary is rudimentary in **(2013)**

(A)Sharks **(B)**Birds

(C)Sphenodon (D)Calotes

38. Identify the option a or b correctly along with its function/characteristic. **(2013)**



(A)a—tettiary follicle, forms Graatian follicle

(B)b—corpus luteum, secretes estrogen

(C)a—primary oocyte, prophase I of meiotic division

(D)b—corpus luteum, secretes progesterone

39. Component of seminal vesicles that provides a forensic test for rape is **(2013)**

(A)Acetic acid (B)Prostaglandin

(C) Fructose (D)Citric acid

40. How many sphincters are present in male urethra? **(2013)**

(A)4 (B)3

(C)2 (D)1

41. Secondary spermatocytes undergo second meiotic division during spermatogenesis to produce **(2013)**

(A)Spermatozoa

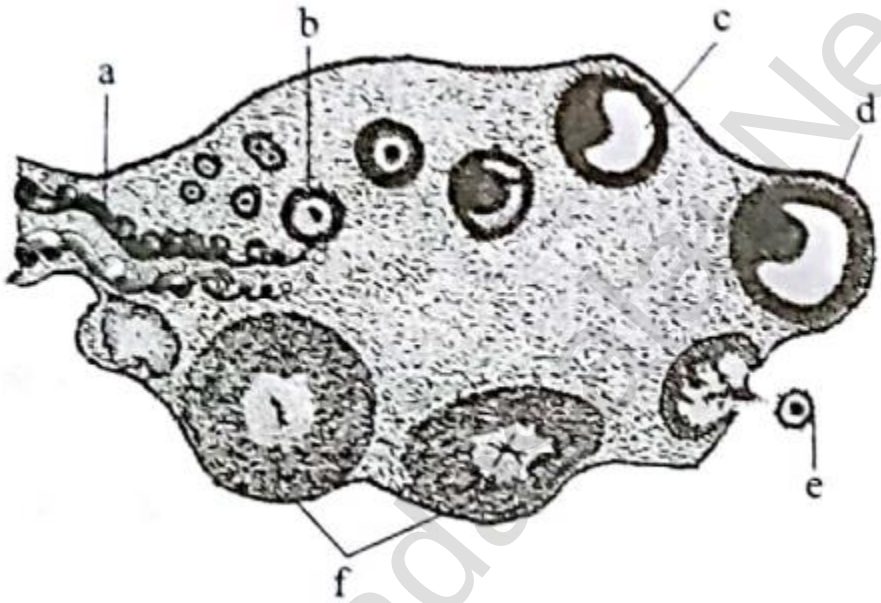
(B)Diploid spermatids

(C)Primary spermatocytes

(D)Spermatogonia

(E) Haploid spermatids

42. Identify the correct labellings in the diagram. **(2013)**



(A)a—blood vessel, b—primary follicle, c—tertiary follicle, d—Graafian follicle, e—ovum, f—corpus luteum

(B)a—primary follicle, b—blood vessel, c—tertiary follicle, d—Graafin follicle, e—ovum, f—corpus luteum

(C)a—blood vessel, b—primary follicle, c—tertiary follicle, d—ovum, e—Graafin follicles, f—corpus luteum

(D)a—ovum, b—Graafian follicle, c—corpus luteum, d—blood vessel, e—primary follicle, f—tertiary follicle

43. What is the correct sequence of sperm formation? **(2013)**

(A)Spermatogonia, Spermatozoa, Spermatocytes, Spermatids

(B)Spermatogonia, Spermatocytes, Spermatids, Spermatozoa

(C) Spermatids, Spermatocytes, Spermatogonia, Spermatozoa

(D)Spermatogonia, Spermatocytes, Spermatozoa, Spermatids

44. Which one of the following is not the function of placenta? **(2013)**

(A)Facilitates removal of carbon dioxide and waste material from embryo.

(B) Secretes oxytocin during parturition.

(C)Facilitates supply of oxygen and nutrients to embryo.

(D)Secretes estrogen.

45. Menstrual flow occurs due to lack of **(2013)**

(A)Oxytocin (B)Vasopressin

(C) Progesterone (D)FSH

46. The main function of mammalian corpus luteum is to produce **(2014)**

(A)Relaxin only

(B)Estrogen only

(C) Progesterone

(D)Human chorionic gonadotropin

47. The shared terminal duct of the reproductive and urinary system in the human male is **(2014)**

(A)Vasa efferentia **(B)**Urethra

(C)Ureter (D)Vas deferens

48. Select the correct option describing gonadotropin activity in a normal pregnant female. **(2014)**

(A)High level of hCG stimulates the thickening of endometrium

(B)High level of FSH and LH stimulates the thickening of endometrium

(C)High level of FSH and LH facilitate implantation of the embryo

(D) High level of hCG stimulates the synthesis of estrogen and progesterone

49. The first sign of growing human foetus in uterus may be noticed by **(2014)**

(A) Listening heart sound

(B)Movement of foetus

(C)Development of limbs and digits

(D)None of the above

50. Testes are extra-abdominal in position."Which of the following is the most appropriate reason?" **(2014)**

(A)Narrow pelvis in males

(B)Special protection for tests

(C)Prostate gland and seminal vesicles occupy maximum space

(D)2.0-2.5℃ lower than the normal body temperature

51. Release of sperms from seminiferous tubules is called **(2014)**

(A)Spermiognenesis **(B)**Spermiation

(C)Spermatogenesis (D)Fertilization

(E)Gametogenesis

52. Entire process of spermatogenesis in man is approzimately in **(2015)**

(A)2 days (B)16 days

(C)32 days **(D)**64 days

53. The persistence of corpus luteum during pregenancy is due to the presence of hormone **(2015)**

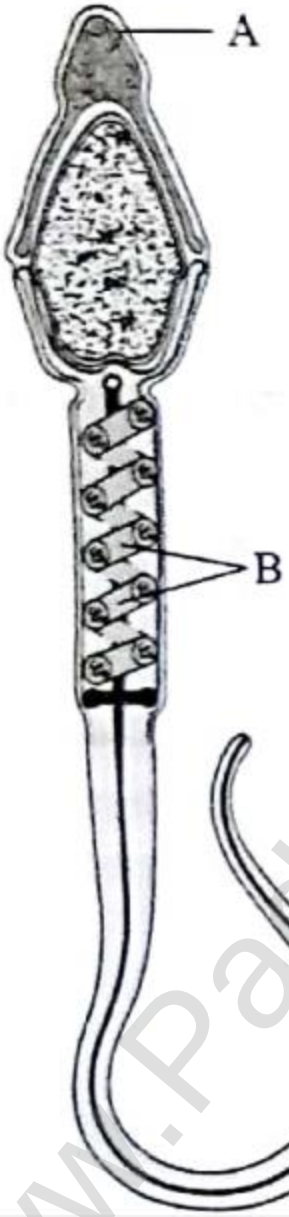
(A)LH

(B) Chorionic Gonadotropin

(C)FSH

(D)Testosterone

54. Structure of a human sperm is shown in the figure with labels A and B. Identify these and give their characteristics. **(2015)**



(A)A—Acrosome—its enzymes helps in fertilisatin

(B)B—Mitochondria—provides energy for fusion of sperm with ovum

(C)A—Plasma membrane—envelops whole sperm

(D)B—polysomes—synthesize enzymes to facilitate fertilization

55. Shortly before menstruation the blood levels of **(2015)**

(A) Estrogen and progesterone decrease

(B)Estrogen and progesterone increase

(C)FSH stabilize

(D)Only progesterone incrases

56. Which of the following layers in an antral follicle is acellular? **(2015)**

(A)Theca interna (B)Stroma

(C) Zona pellucid (D)Granulosa

57. In human females, meiosis-II is not completed until **(2015)**

(A) Fertilization (B)Uterine implantation

(C)Birth (D)Puberty

58. Which of the following events is not associated with ovulation in human female? **(2015)**

(A)Full development of Graafian follicle

(B)Release of secondary oocyte

(C)LH surge

(D) Decrease in estradiol

59. Hysterectomy is surgical removal of **(2015)**

(A)Vas deference (B)Mammary glands

(C) Uterus (D)Prostate gland

60. Which of these is not an important component of initiation of parturition I n humans? **(2015)**

(A)Release of oxytocin

(B) Release of prolactin

(C)Increase in estrogen and progesterone ratio

(D)Synthesis of prostaglandins

61. Capacitation refers to changes in the **(2015)**

(A)Ovum after fertilization

(B)Sperm after fertilization

(C) Sperm before fertilization

(D)Ovum before fertilization

62. Which of the following cells during gametogenesis is normally diploid? **(2015)**

(A) Spermatogonia (B)Secondary polar body

(C)Primary polar body (D)Spermatid

63. Cowper's glands are found in

(A)Female amphibians **(B)**Male mammals

(C)Female mammals (D)Male amphibians

64. Fertilization in humans is practically feasible only if **(2016)**

(A)The ovum and sperms are trans ported simultaneously to ampullary — isthmic junction of the cervix.

(B)The sperms are transported into cervix within 48 hours of release of ovum in uterus.

(C)The sperms are transported into vagina just after the release of ovum in fallopian tube.

(D) The ovum and sperms are transported simultaneously to ampullary—isthmic junction of the fallopian tube.

65. Select the incorrect statement. **(2016)**

(A)LH and FSH decrease gradually during the follicular phase.

(B)LH triggers secretion of androgens from the Leydigcells.

(C)FSH stimulates the sertoli cells which help in spermiogenesis.

(D)LH triggers ovulation in ovary.

SECTION D : CHAPTER-END TEST

1. Formation of archenteron starts in

(A)Morula (B)Blastula

(C) Early gastrula (D)Early neurula

2. In humans, the embryo is protected in

(A)Peritoneal cavity **(B)**Amniotic cavity

(C)Pleural cavity (D)Allantois

3. Which gland secretes alkaline mucus in urethra to neutralize the acidity of urine?

(A)Prostate gland **(B)**Cowper's gland

(C)Seminal vesicles (D)Perpetual glands

4. Sixty percent of semen is produced by

(A)Bartholin's gland (B)Cowper's glands

(C) Seminal vesicles (D)Prostate gland

5. Identical twins are also known as

(A) Monozygotic twins (B)Dizygotic twins

(C)Fraternal twins (D)Both B and C

6. Eggs produced in a year by an ovary of non-pregnant woman is

(A)12 **(B)**6

(C)24 (D)48

7. Which one holds corona radiate?

(A) Mucopolysaccharide (B)Oligosaccharide

(C)Lipoplysaccharide (D) Lipoprotein

8. Newly released mammalian egg is covered by

(A)Plasma membrane (B)Vitelline membrand

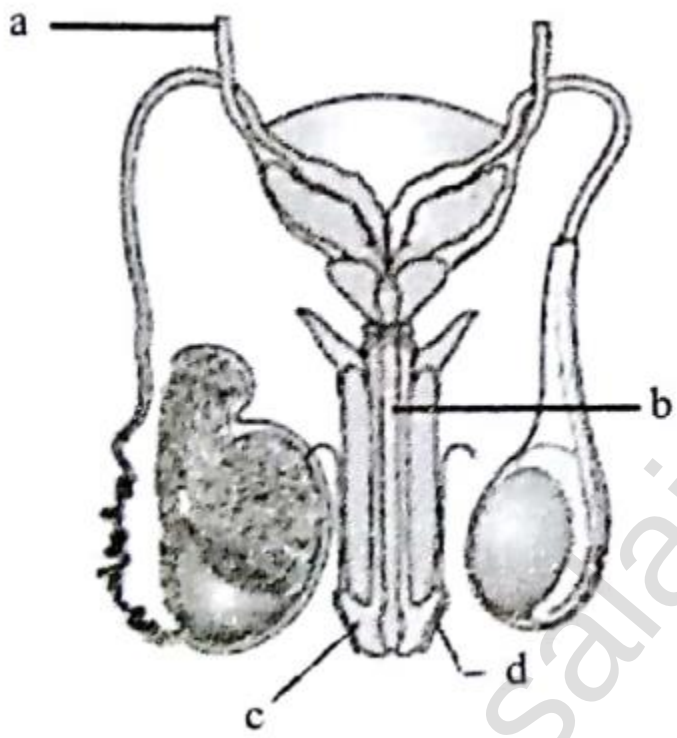
(C) Zona pellucid (D)All the above

9. Egg of Frog is

(A)Centrolecithal (B)Macrolecithal

(C) Telolecithal (D)Microlecithal

10. Recognise the figure and find out the correct matching.



(A)a—ureter, b—urethra, c—glans penis, d—foreskin

(B)b—ureter, a—urethra, d—glans penis, c—foreskin

(C)a—ureter, b—urethra, d—glans penis, c—foreskin

(D)b—ureter, a—urethra, d—glans penis, c—foreskin

11. Which represents a condition of highly reduced motility?

(A)Azospermia

(B)Polyspermy

(C)Oligospermia

(D) Asthenospermia

12. Unbilical cord contains

(A)Umbilicus

(B)Placenta

(C)Discus proligerus

(D) Allantoic artery and vein

13. Pattern of cleavage in egg of Frog is

(A)Meroblastic **(B)**Holoblastic unequal

(C)Holoblastic equal (D)All the above

14. Establishment of polarity (anterior/posterior, dorsal/ventral, medial/lateral) is called

(A)Anamorphosis

(B)Organiser phenomenon

(C) Pattern formation

(D)Axis formation

15. Which type of blastula occurs in Frog?

(A)Stereoblastula **(B)**Coeloblastula

(C)Holoblastula (D)Amphiblastula

16. Which of the following is immortal?

(A)Somatic cell **(B)**Germ cell

(C)Glomerular cell (D)Cells of pituitary

17. The animal in which tests descend into scrotum only during breeding season

(A)Frog (B)Kangroo

(C)Shrew **(D)**Bat

18. Neubenkern is part of

(A)Human ovum **(B)**Human sperm

(C)Foetus (D)Graafian follicle

19. Which of the cellular layers disintegrates and regenerates again and again in human?

(A) Endometrium of uterus

(B)Dermis of skin

(C)Cornea of eye

(D)Endothelium of blood vessels

20. Structure absent in Frog's testis is

(A)Seminiferous tubules (B)Seminal vesicles

(C) Sertoli cells (D)Interstitial cells

21. Meroblastic cleavage is

(A)Total (B)Spiral

(C) Incomplete (D)Horizontal

22. Tuncia albuginea is related to

(A)Liver (B)Lung

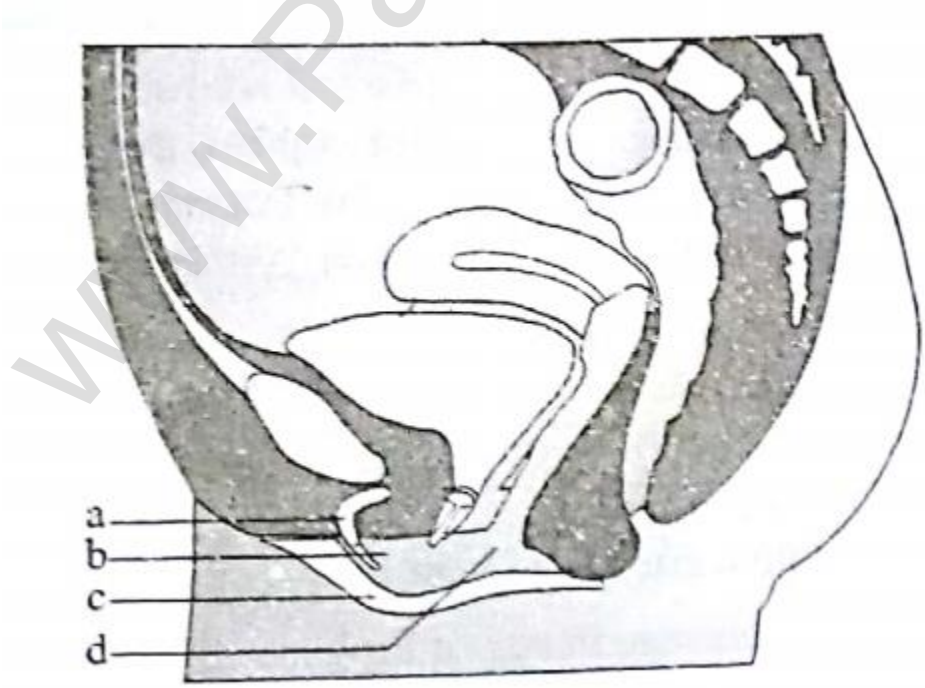
(C)Spleen **(D)**Testes

23. Type of placenta present in humans/Rabbit is

(A) Discoidal (B)Zonary

(C)Diffuse (D)Cotyledonary

24. Recognise the figure and find out the correct matching.



(A)a—clitoris, b—labia majora, c—labia minora, d—vaginal oricice

(B)a—clitoris, c—labia majora, b—labia minora, d—vaginal oricice

(C)b—clitotis, a—labia majora, d—labia minora, c—vaginal oricice

(D)c—clitoris, d—labia majora, a—labia minora, b—vaginal oricice

25. Number of foetal mambranes in humans is

(A)2 **(B)**3

(C)4 (D)1

26. Placenta if formed in humans by

(A)Amnion (B)Allantois

(C) Chorion (D)All the above

27. Two offspring developed in the same uterus from fertilization of two different ova are

(A)Monozygotic twins (B)Dizygotic twins

(C)Fraternal twins **(D)**Both B and C

28. In insect egg, cleavage is

(A)Equal holoblastic

(B)Unequal holoblastic

(C) Meroblastic superficial

(D)Meroblastic discoidal

29. In which mammals testes remain in abdomen?

(A)Human **(B)**Elephant

(C)Rabbit (D)Ox

30. Sertoli cells occur in

(A) Human testis (B)Frog testis

(C)Human ovary (D)Frog ovary

31. Noncleidoic eggs occurs in

(A)Birds **(B)**Fish

(C)Reptiles (D)Platypus

32. Development of which trait freed land vertebrates from water

(A)Four appendages

(B)Four chambered heart

(C) Cleidoic egg

(D)Lungs

33. What is true deuterostomes?

(A)Presence if scguziciek

(B)Non-formation of anus from blastopore

(C)Coelom lined by mesoderm on both sides

(D) Absence of false coelom

34. Divison of human egg is

(A) Equal holoblastic (B)Unequal holoblastic

(C)Superficial meroblastic (D)Discoidal meroblastic

35. Early embroyonic stage that follows blastula is

(A)Morula (B)Amphiblastula

(C)Radula **(D)**Gastrula

36. Free Martin is an example of

(A) Hormonal control of sex

(B)Sex reversal

(C)Transfomer gene

(D)Nutritional control of sex

37. Human placenta is

(A) Haemochorial (B)Syndesmochorial

(C)Yolk sac (D)Haemo-endothelial

38. Eggs of placental mammals are

(A)Homolecithal **(B)**Alecithal

(C)Microlecithal (D)Mesolecithal

39. Function of allantois is

(A)Respiration

(B)Excretion

(C) Nutrition and excretion

(D)Protection from shock

40. The most primitive type of mammalian placenta is

(A)Syndesmochorial (B)Endotheliochorial

(C)Haemochorial **(D)**Epitheliochorial

41. In apomictic/parthenogenetic development the individuals are

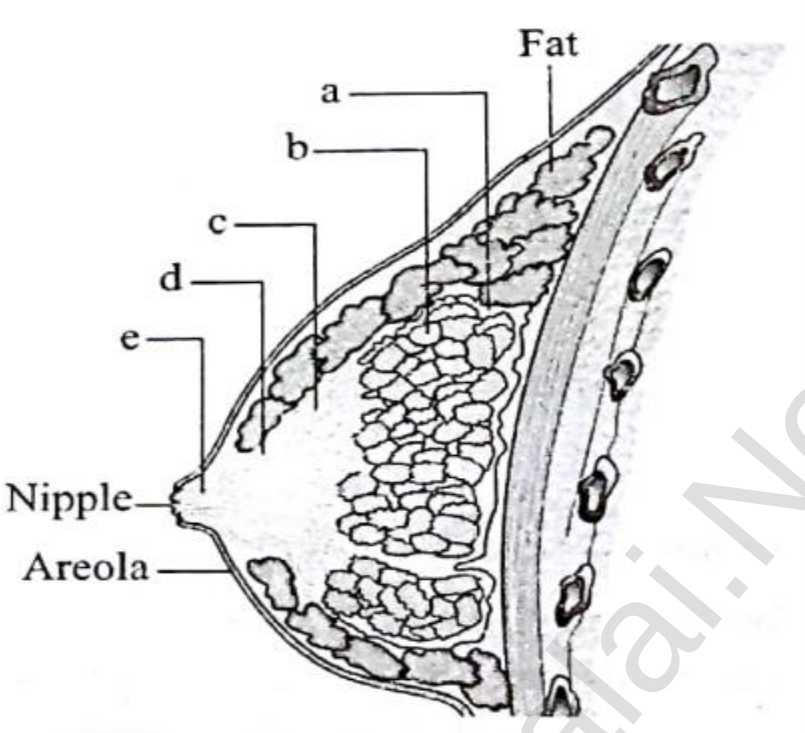
(A) Morphologically and genetically similar

(B)Morophologically and genetically different

(C)Morphologically different but genertically similar

(D)None of the above

42. Recognise the figure and find out the correct matching



(A)a—mammary alveolus, b—mammary lobe, c—mammary duct, d—ampulla, e—lactiferous duct

(B)b—mammary alveolus, c—mammary lobe, d—mammary duct, e—ampulla, a—lactiferous duct

(C)c—mammary alveolus, b—mammary lobe, a—mammary duct, d—ampulla, e—lactiferous duct

(D)b—mammary alveolus, a—mammary lobe, c—mammary duct, d—ampulla, e—lactiferous duct

43. Monozygotic twins are produced when

(A)Two ova are fertilized simultaneously

(B)Incomplete cleavage of zygote

(C) First cleavage of zygote is followed by separation into two

(D)There is no cleavage

44. Testis of Whale are

(A)Extra-abdominal

(B)Half external, half internal

(C) Internal

(D)None of the above

45. Germinal epithelium of ovary has

(A) Cuboidal cells (B)Columnar cells

(C)Squamous cells (D)Stratified cells

46. Immediate membrane covering the mammalian egg is

(A)Corona radiate (B)Zona pellucid

(C) Vitelline membrane (D)Chorion

47. Breaking of acrosome membrane is

(A) Agglutination (B)Activation

(C)Cavitation (D)Capcitation

48. In teloecithal egg, the yolk is found

(A)All over the egg **(B)**On one side

(C)Both the sides (D)Centre

49. Meroblastic cleavage is division

(A)Horizontal **(B)**Partial/parietal

(C)Total (D)Spiral

50. Amorula can be differentiated from blastula in

(A)Presence of cavity

(B)Presence of more yolk

(C)Presence of yolk

(D) Absence of cavity