

- 1) Which of the following is correct regarding HIV, hepatitis B, gonorrhoea and trichomoniasis?
- (a) Gonorrhoea is a STD whereas others are not.
(b) Trichomoniasis is a viral disease whereas others are bacterial.
(c) HIV is a pathogen whereas others are diseases.
(d) Hepatitis B is eradicated completely whereas others are not.
- 2) Which one of the following groups includes sexually transmitted diseases caused by bacteria only?
- (a) Syphilis, gonorrhoea and candidiasis (b) Syphilis, chlamydiasis and gonorrhoea
(c) Syphilis, gonorrhoea and trichomoniasis (d) Syphilis, trichomoniasis and pediculosis
- 3) Identify the correct statements from the following
- (a) Chlamydiasis is a viral disease
(b) Gonorrhoea is caused by a spirochaete bacterium, *Treponema palladium*
(c) The incubation period for syphilis is 2 to 14 days in males and 7 to 21 days in females
(d) Both syphilis and gonorrhoea are easily cured with antibiotics
- 4) A contraceptive pill prevents ovulation by
- (a) blocking fallopian tube (b) inhibiting release of FSH and LH
(c) stimulating release of FSH and LH (d) causing immediate degeneration of released ovum.
- 5) The approach which does not give the defined action of contraceptive is
- (a) Hormonal contraceptive-Prevents entry of sperms, prevent ovulation and fertilization
(b) Vasectomy-Prevents spermatogenesis (c) Barrier method-Prevents fertilization
(d) Intra uterine device-Increases phagocytosis of sperms, suppresses sperm motility and fertilizing capacity of sperms
- 6) Read the given statements and select the correct option.
Statement 1: Diaphragms, cervical caps and vaults are made of rubber and are inserted into the female reproductive tract to cover the cervix before coitus.
Statement 2: They are chemical barriers of conception and are reusable.
- (a) Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.
(b) Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1.
(c) Statement 1 is correct but statement 2 is incorrect (d) Both statements 1 and 2 are incorrect
- 7) Match column I with column II and select the correct option from the codes given below.
- | Column I | Column II |
|-------------------------|----------------------|
| A. Copper releasing IUD | (i) LNG-20 |
| B. Hormone releasing | (ii) Lippes loop IUD |
| C. Non medicated IUD | (iii) Saheli |
| D. Mini pills | (iv) Multiload-375 |
- (a) A-(iv), B-(ii), C-(i), D-(iii) (b) A-(iv), B-(i), C-(iii), D-(ii) (c) A-(i), B-(iv), C-(ii), D-(iii)
(d) A-(iv), B-(i), C-(ii), D-(iii)
- 8) Select the incorrect action of hormonal contraceptive pills from the following
- (a) Inhibition of spermatogenesis. (b) Inhibition of ovulation
(c) Changes in cervical mucus impairing its ability to allow passage and transport of sperms
(d) Alteration in uterine endometrium to make it unsuitable for implantation
- 9) Haemophilia is more common in males because it is a
- (a) Recessive character carried by Y-chromosome (b) Dominant character carried by Y-chromosome
(c) Dominant trait carried by X-chromosome (d) Recessive trait carried by X-chromosome
- 10) ABO blood group in man is controlled by
- (a) Multiple alleles (b) Lethal genes (c) Sex linked genes (d) Y-linked genes
- 11) Three children of a family have blood groups A, AB and B. What could be the genotypes of their parents?
- (a) $I^A I^B$ and $I^O I^O$ (b) $I^A I^O$ and $I^B I^O$ (c) $I^B I^B$ and $I^A I^A$ (d) $I^A I^A$ and $I^O I^O$

- 12) Which of the following is not correct?
(a) Three or more alleles of a trait in the population are called multiple alleles
(b) A normal gene undergoes mutations to form many alleles
(c) Multiple alleles map at different loci of a chromosome
(d) A diploid organism has only two alleles out of many in the population
- 13) Which of the following phenotypes in the progeny are possible from the parental combination AxB?
(a) A and B only (b) A,B and AB only (c) AB only (d) A, B, AB and O
- 14) Which of the following phenotypes is not possible in the progeny of the parental genotypic combination $I^A I^O \times I^A I^B$?
(a) AB (b) O (c) A (d) B
- 15) Which of the following is true about Rh factor in the offspring of a parental combination DdxDd (both Rh positive)?
(a) All will be Rh-positive (b) Half will be Rh positive (c) About $\frac{3}{4}$ will be Rh negative
(d) About one fourth will be Rh negative
- 16) What can be the blood group of offspring when both parents have AB blood group?
(a) AB only (b) A, B and AB (c) A, B, AB and O (d) A and B only
- 17) If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be
(a) $I^A I^A$ and $I^B I^O$ (b) $I^A I^O$ and $I^B I^O$ (c) $I^A I^O$ and $I^O I^O$ (d) $I^O I^O$ and $I^B I^B$
- 18) XO type of sex determination and XY type of sex determination are examples of
(a) Male heterogamety (b) Female heterogamety (c) Male homogamety (d) Both (b) and (c)
- 19) In an accident there is great loss of blood and there is no time to analyse the blood group which blood can be safely transferred?
(a) 'O' and Rh negative (b) 'O' and Rh positive (c) 'B' and Rh negative (d) 'AB' and Rh positive
- 20) Father of a child is colourblind and mother is carrier for colourblindness, the probability of the child being colourblind is
(a) 25% (b) 50% (c) 100% (d) 75%
- 21) A marriage between a colourblind man and a normal woman produces
(a) All carrier daughters and normal sons (b) 50% carrier daughters, 50% normal daughters
(c) 50% colourblind sons, 50% normal sons (d) All carrier offsprings
- 22) Down's syndrome is a genetic disorder which is caused by the presence of an extra chromosome number
(a) 20 (b) 21 (c) 4 (d) 23
- 23) Klinefelters syndrome is characterized by a karyotype of
(a) XYY (b) XO (c) XXX (d) XXY
- 24) Females with Turners syndrome have
(a) Small uterus (b) Rudimentary ovaries (c) Underdeveloped breasts (d) All of these
- 25) Patau's syndrome is also referred to as
(a) 13-Trisomy (b) 18-Trisomy (c) 21-Trisomy (d) None of these
- 26) "Universal Donor" and "Universal Recipients" blood group are _____ and _____ respectively
(a) AB, O (b) O, AB (c) A, B (d) B, A
- 27) ZW-ZZ system of sex determination occurs in
(a) Fishes (b) Reptiles (c) Birds (d) All of these
- 28) Co-dominant blood group is
(a) A (b) AB (c) B (d) O
- 29) Which of the following is incorrect regarding ZW-ZZ type of sex determination?
(a) It occurs in birds and some reptiles (b) Females are homogametic and males are heterogametic
(c) Male produce one type of gamete (d) It occurs in gypsy moth
- 30) Mangelism is a genetic disorder which is caused by the presence of an extra chromosome number
(a) 20 (b) 21 (c) 4 (d) 23
- 31) An allohexaploidy contains
(a) Six different genomes (b) Six copies of three different genomes
(c) Two copies of three different genomes (d) Six copies of one genome
- 32) The A and B genes are 10 cm apart on a chromosome. If an AB/ab heterozygote is testcrossed to ab/ab, how many of each progeny class would you expect out of 100 total progeny?
(a) 25 AB, 25 ab, 25 Ab, 25 aB (b) 10 AB, 10 ab (c) 45 AB, 45 ab (d) 45 AB, 45 ab, 5 Ab, 5 aB

33) Match list I with list II

List I	list II
A. A pair of chromosomes extra withi diploid	i) monosomy
B. One chromosome extra to the diploid	ii) tetrasomy
C. One chromosome loses from diploid	iii) trisomy
D. Two individual chromosomes lose from diploid	iv) double monosomy

(a) A-i, B-iii, C-ii, D-iv (b) A-ii, B-iii, C-iv, D-i (c) A-ii, B-iii, C-i, D-iv (d) A-iii, B-ii, C-i, D-iv

34) Which of the following sentences are correct?

1. The offspring exhibit only parental combinations due to incomplete linkage
2. The linked genes exhibit some crossing over in complete linkage
3. The separation of two linked genes are possible in incomplete linkage
4. Crossing over is absent in complete linkage

(a) 1 and 2 (b) 2 and 3 (c) 3 and 4 (d) 1 and 4

35) Accurate mapping of genes can be done by three point test cross because increases

- (a) Possibility of single cross over (b) Possibility of double cross over
(c) Possibility of multiple cross over (d) Possibility of recombination frequency

36) Due to incomplete linkage in maize, the ratio of parental and recombinants are

(a) 50:50 (b) 7:1:1:7 (c) 96.4: 3.6 (d) 1:7:7:1

37) Genes G S L H are located on same chromosome. The recombination percentage is between L and G is 15%, S and L is 50%, H and S are 20%. The correct order of genes is

(a) GHSL (b) SHGL (c) SGHL (d) HSLG

38) The point mutation sequence for transition, transition, transversion and transversion in DNA are

- (a) A to T, T to A, C to G and G to C (b) A to G, C to T, C to G and T to A
(c) C to G, A to G, T to A and G to A (d) G to C, A to T, T to A and C to G

39) If haploid number in a cell is 18. The double monosomic and trisomic number will be

(a) 35 and 37 (b) 34 and 37 (c) 37 and 35 (d) 17 and 19

40) Changing the codon AGC to AGA represents

- (a) missense mutation (b) nonsense mutation (c) frameshift mutation (d) deletion mutation

41) Assertion (A): Gamma rays are generally use to induce mutation in wheat varieties.

Reason (R): Because they carry lower energy to non-ionize electrons from atom

- (a) A is correct. R is correct explanation of A (b) A is correct. R is not correct explanation of A
(c) A is correct. R is wrong explanation of A (d) A and R is wrong

42) How many map units separate two alleles A and B if the recombination frequency is 0.09?

(a) 900 cM (b) 90 cM (c) 9 cM (d) 0.9 cM

43) Select the proper hormonal Composition of oral Contraceptive pills

(a) FSH and Prolactin (b) prolactin & TSH (c) TSH & FSH (d) FSH & LH

44) In ZIFT technique the zygote is transferred at the stage of _____

(a) 16 blastomere (b) morula (c) 12 blastomere (d) 8 blastomere

45) The family planning programme was initiated by India in _____

(a) 1953 (b) 1972 (c) 1963 (d) 1951

46) In the year _____ india is expected to become the largest country in population size _____

(a) 2021 (b) 2025 (c) 2022 (d) 2030

47) Sperm remains active for _____ hours in the female reproductive tract

(a) 60 (b) 70 (c) 72 (d) 78

48) Saheli is an example for _____ method

(a) Mechanical barrier (b) Chemical barrier (c) Hormonal barrier (d) Intra uterine devices

49) Formation of chronic ulcer is a symptom of _____

(a) Genital herpes (b) Syphilis (c) Gonorrhoea (d) AIDS

50) Fatigue, Jaundice, stomach pain are the symptoms of _____

(a) Genital warts (b) AIDS (c) Chlamydia (d) Hepatitis-B

51) The incubation period for _____ varies between 1-8 months.

(a) HPV (b) HIV (c) HBV (d) candida

- 52) The incubation period for _____ can be more than 10 years.
(a) HPV (b) HBV (c) Treponema (d) HIV
- 53) PAP smear can help to detect
(a) Jaundice (b) Cancer (c) AIDS (d) Hepatitis B
- 54) _____ vaccination of girls between 9-13 years can prevent cervical cancer.
(a) HIV (b) HPV (c) MMR (d) HBV
- 55) Mayer - Rokitansky syndrome is a condition in which
(a) Ova are not produced (b) Ovaries are not formed (c) Uterus is not functioning
(d) Fallopian tube is ruptured
- 56) Test tube baby is got by _____ technique.
(a) IUI (b) CVS (c) ICSI (d) IVF
- 57) Cryopreservation of embryos are done when _____
(a) When eggs are not available (b) Sperm count is less
(c) More embryos are available than the required (d) there is abnormality in the embryo
- 58) One sperm directly injected into cytoplasm of the egg in _____ technique.
(a) ICSI (b) GIFT (c) IUT (d) TCSE
- 59) _____ involves taking a sample of placental tissues to test for chromosomal abnormalities
(a) CVS (b) ICSI (c) TESE (d) IVF
- 60) _____ is needed for normal functioning of reproductive structures
(a) Vitamin A (b) Vitamin E (c) Vitamin B (d) Vitamin C
- 61) _____ is observed as world population day
(a) 11th June (b) 11th April (c) 11th July (d) 11th May
- 62) International diseases refer to _____
(a) Syphilis and AIDS (b) AIDS and Gonorrhoea (c) AIDS and Hepatitis B
(d) Syphilis and Gonorrhoea
- 63) Most of the intrauterine transfer of embryo is done at _____ stage
(a) 8 celled (b) 16 celled (c) 32 celled (d) 4 celled
- 64) _____ is an epidemic disease.
(a) HPV (b) HIV (c) Cervical cancer (d) Jaundice
- 65) In India, Family Planning Programme was introduced in
(a) 1941 (b) 1951 (c) 1961 (d) 1971
- 66) Expansion of the RCH is _____
(a) Reproduction and Children Health Programme (b) Reproductive and Child's Health Committee
(c) Reproduction and Critical Health Care (d) Reproductive and Child Health Care
- 67) One of the following prevents sperm from heading off to penis as the discharge has no sperms in it.
(a) Tubectomy (b) LNG - 20 (c) Vasectomy (d) Cu T 380 Ag
- 68) This is not Major task of RCH.
(a) Vaccinating the mother and child for infectious diseases (b) Introducing sex education in Schools
(c) Educating couples about the available with control
(d) Creating awareness about care for pregnant Women
- 69) All the following aims at creating a safe and secure environment for both females and males. Except
(a) Sexual Harassment at work place Act (b) POCSO Act
(c) Recommendation of Justice Verma Committee, 2013 (d) PCPNDT
- 70) This is an ideal contraceptive for females who want to delay pregnancy
(a) Oral contraceptives (b) IUDs (c) Diaphragms, cervical caps (d) Vaults
- 71) At which stage the embryo is transferred into the uterus.
(a) 4 celled stage (b) 8 celled stage (c) 12 celled stage (d) 16 celled stage
- 72) This technique is used to diagnose the chromosomal abnormalities.
(a) Assisted Reproductive Technology (ART) (b) Micro Testicular Sperm Extraction (c) Amniocentesis
(d) GIFT
- 73) Identify the bacterial STI
(a) Gonorrhoea (b) Syphilis (c) Chlamydia (d) all the above
- 74) An abnormal foetal heart beat rate or pattern indicates the foetus is not getting enough
(a) Nutrients (b) Oxygen (c) Blood (d) Signals

- 75) Fatigue, jaundice, fever, rash, stomach pain, liver Cirrhosis and liver failure - are the symptoms of
(a) Chlamydia (b) Lymphogranuloma Venereum (c) Hepatitis (d) Syphilis
- 76) In this Assisted Reproductive Technology (ART), the sperms and egg are allowed to unite outside the body and then transformed into the woman's uterus.
(a) Intra - uterine insemination (IUI) (b) In vitro Fertilization (IVF)
(c) Zygote Intra - Fallopian Transfer (ZIFT) (d) Intra uterine transfer (IUT)
- 77) Cervical Cancer can be diagnosed by X combined with Y test, but the stage of Cancer is determined by Z
- | | | | |
|------------------------|------------------------|---------------------|------------------------|
| (a) | (b) | (c) | (d) |
| X Y Z | X Y Z | X Y Z | X Y Z |
| HPV PAP Smear PET Scan | PAP Smear HPV PET Scan | MRI CT Scan MRI | PET Scan X-Ray CT Scan |
- 78) Prevention of children from sexual offences is covered under _____ act
(a) PCPNDT (b) patent act (c) ART (d) POCSO
- 79) _____ can be diagnosed by PAP smear test.
(a) Cervical cancer (b) Bone cancer (c) Blood cancer (d) Intestinal cancer
- 80) _____ is a prenatal technique to detect chromosomal abnormalities in the foetus
(a) Amniocentesis (b) PSA test (Prostate Specific Antigens Test) (c) PAP test
(d) PT test (Prothrombin Time Test)
- 81) The problem of overpopulation can be overcome by _____
(a) awareness program (b) free education (c) Birth control (d) meals scheme
- 82) Foaming tablets and jellies are _____ barriers for birth control.
(a) mechanical (b) Chemical (c) hormonal (d) natural
- 83) Oral contraceptive pills contain synthetic _____ and hormones
(a) androgen and testosterone (b) Androgen and Oxytocin (c) relaxin and inhibin
(d) Progesterone and estrogen
- 84) _____ is an example of a contraceptive pill.
(a) Alesse (b) Ortho Tri-cyclen (c) Saheli (d) Eryosterol
- 85) IUD's increase _____ of the sperm within the uterus.
(a) Endocytosis (b) Pinocytosis (c) Phagocytosis (d) Exocytosis
- 86) The _____ method of contraception has a success rate of 95 - 99% in India.
(a) IUDs Intra-uterine devices (b) Hormonal (c) Chemical (d) mechanical
- 87) Diseases like _____ are transmitted sexually and by sharing of needles
(a) gonorrhoea (b) genital herpes (c) AIDS/Hepatitis - B (d) candidiasis
- 88) _____ is a sexually transmitted disease caused by protozoan
(a) Trichomoniasis (b) Genital warts (c) Syphilis (d) Candidiasis
- 89) _____ is a sexually transmitted disease caused by a fungus
(a) Chlamydia (b) Candidiasis (c) Genital herpes (d) Syphilis
- 90) _____ is a cause of infertility in women.
(a) varicocele (b) Endometriosis/Uterine fibroids (c) well developed ovaries (d) hormonal balance
- 91) _____ is a procedure to treat infertile man with low sperm count
(a) Intra-uterine insemination (b) In vitro fertilization (c) Intra-uterine transfer
(d) Zygote intra-fallopian transfer
- 92) _____ is a method for preservation of embryos
(a) Mechanical preservation (b) Chemical preservation (c) Cryopreservation (d) Heat preservation
- 93) _____ is a condition in which there is absence of spermatozoa in the ejaculate serum
(a) teratozoospermia (b) Asthenozoospermia (c) Oligozoospermia (d) Azoospermia
- 94) Coitus can be avoided on the 14th day of the menstrual cycle to prevent fertilization, because _____ takes place on that day.
(a) Lactation (b) Ovulation (c) Sperms are more active (d) Uterus is ready for implantation
- 95) _____ is a method used to detect foetal diseases during early pregnancy
(a) CT scanning (b) MRI scanning (c) Ultrasound scanning (d) PET scanning
- 96) Usage of _____ greatly reduces the risk of STI.
(a) IUDS (b) Latex Condoms (c) Saheli (d) Lippes loop
- 97) Which of the following is a hormone releasing Intrauterine Device (IUD)?
(a) Multi load 375 (b) LNG - 20 (c) Cervical cap (d) Vault

- 98) Assisted reproductive technology, IVF involves the transfer of
(a) Ovum into the fallopian tube (b) Zygote into the falloptan tube (c) Zygote into the uterus
(d) Embryo with 16 blastomeres into the fallopian tube
- 99) In context of amniocentesis, which of the following statements is incorrect?
(a) It is usually done when a woman is between 14-16 weeks pregnant
(b) It is used for prenatal sex determination (c) It can be used for detection of Down syndrome
(d) It can be used for detection of cleft palate
- 100) Which of the following approach does not give the defined action of contraceptive?
(a)
a) Barrier methods Prevent fertilizers
(b)
b) Intra uterine devices Increases phagocytosis of sperms suppresses sperm motility and fertilizing capacity of sperms.
(c)
c) Hormonal contraceptives Prevent retard entry of sperms, prevent ovulation and fertilization.
(d)
d) Vasectomy Prevents spermatogenesis
- 101) Which of the following is Not a natural contraceptive?
(a) Rhythm method (b) Lactational amenorrhoea (c) Progestasert (d) Continuous abstinence
- 102) Identify the fungal STD(s) _____
(i) Trichomoniasis
(ii) Genital herpes
(iii) Candidiasis
(iv) Genital warts
(a) Only (i) (b) Only (iii) (c) Only (iv) (d) Both (ii) and (iv)
- 103) Pick out the incorrect statement regarding the character of an good contraceptive.
(a) It should be user friendly (b) should not affect sexual drive (c) side effects must be least
(d) should not be easily available
- 104) Identify the mismatched pair.
(a) Syphilis - Treponema palladium (b) Lymphogranuloma venereum - Chlamydia trachomatis
(c) Candidiasis - Albigo candida (d) Genital warts - Human Papilloma virus
- 105) Legalized marriageable age of female in India is _____
(a) 19 years (b) 20 years (c) 18 years (d) 21 years
- 106) Identify the correct statement.
(a) Lactational amenorrhea is a permanent birth control method
(b) Condoms are made of polyethylene glycol and lambskin (c) LNG -20 is a copper-releasing IUD
(d) Diaphragm covers the cervix there by preventing sperm entry
- 107) According to WHO, India is the _____ largest HIV affected country.
(a) first (b) second (c) third (d) seventh
- 108) Identify the correct statement.
(a) MTP is the voluntary killing of infant (b) MTP is legalized in India from 1974
(c) Performing MTP during second trimester is more risky. (d) It is a surgical- based abortion.
- 109) In chorionic villus sampling test, the tissue sample is taken from _____
(a) amniotic fluid (b) placental tissue (c) Intestinal villi (d) foetal liver
- 110) Given below are the basic steps in IVF treatment cycle. Select the proper sequence.
(i) Ovarian stimulation
(ii) Egg retrieval
(iii) fertilization
(iv) Embryo, culture
(v) Embryo transfer
(a) (ii) - (iv) - (v) - (i) - (iii) (b) (i) - (iii) - (ii) - (v) - (iv) (c) (i) - (ii) - (iii) - (iv) - (v)
(d) (ii) - (i) - (iii) - (v) - (iv)
- 111) Enactment of _____ banned the identification of sex and to prevent the prenatal abortion
(a) POCSO Act (b) POTA Act (c) PCPNDT Act (d) GOONDA Act
- 112) Which is NOT a national health care programme?
(a) Pradhan Mantri Surakshit Matritva Abhiyan (b) Pradhan Mantri Fiscal Bhima Yojana
(c) RMNCH +A approach (d) Janani Shishu Suraksha Karyakaram
- 113) Which one of the following is not a step in IVF treatment?
(a) Testes stimulation (b) Ovarian stimulation (c) Egg retrieval (d) Fertilization and embryo culture

- 114) An IUCD is
(a) Copper -T (b) Condom (c) Vasectomy (d) pill
- 115) Contraceptive oral pills help in birth control by
(a) Killing of ova (b) Preventing ovulation (c) Killing the sperms
(d) Forming barrier between sperms and ova
- 116) MTP is
(a) Multi Trade Practices (b) Malthusian Treatise on Population (c) Multiple Temporary Frequency
(d) Medical Termination of Pregnancy
- 117) A method of sterilisation is
(a) IUDCB (b) Diaphragm (c) Vasectomy (d) Loop
- 118) Progesterone present in contraceptive pill is meant for
(a) Checking ovulation (b) Preventing fertilization (c) Preventing implantation of zygote
(d) Preventing cleavage
- 119) Tubectomy is a method of population control is performed on
(a) both males and females (b) males only (c) females only (d) only pregnant
- 120) Which is related to males?
(a) Oral pill (b) Tubectomy (c) Vasectomy (d) None of the above
- 121) A method of birth control is
(a) GIFT (b) HJF (c) IVF-ET (d) IUDS
- 122) Amniocentesis is employed for determining
(a) Hereditary abnormality in embryo (b) Cardiac ailments of embryo
(c) Errors in amino acid metabolism in embryo (d) All the above
- 123) Which of the following is a mechanical barrier used in birth control?
(a) Copper T (b) Diaphragm (c) Loop (d) Dalcon shelid
- 124) Which one is the safest method of birth control?
(a) Termination of the unwanted pregnancy (b) Sterilisation techniques (c) Rhythm method
(d) Use of physical barriers
- 125) In human females, menstruation can be referred by administration of
(a) FSH and LH (b) Estrogen and progesterone (c) FSH only (d) LH only
- 126) IVF involves transfer into fallopian tube of
(a) Zygote or embryo upto 8 celled stage (b) 32 celled stage (c) Zygote only
(d) Embryo only upto 8 celled stage
- 127) The non medicated IUD is
(a) Copper T (b) progestasert (c) Lippes loop (d) LNG-20
- 128) Most effective contraceptive method for ladies is
(a) Rhythm method (b) ECP (c) MTP (d) Cu-T
- 129) Saheli, a new oral contraceptive for females developed by Indian scientists is a
(a) Steroidal preparation (b) Hormonal preparation (c) Non - steroidal preparation
(d) Toxic preparation to kill sperms
- 130) Which one is the most widely accepted method of contraception presently in India?
(a) Diaphragm (b) IUDS (c) Cervical caps (d) Tubectomy
- 131) ZIFT is transfer of
(a) Zygote into fallopian tube (b) Embryo into uterus
(c) Mixture of sperms and ova into fallopian tube (d) Mixture of sperms and ova into uterus
- 132) Test tube baby programme involves
(a) Intra cytoplasmic sperm injection (b) Gamete intra fallopian transfer
(c) Intra uterine insemination (d) Zygote intra fallopian transfer
- 133) Urino genital track infection in males accompanied by yellow discharge, burning feeling on passing urine, fever and headache is
(a) AIDS (b) Gonorrhoea (c) Hepatitis B (d) Syphilis
- 134) Which is not a cause of male infertility?
(a) Motile sperms (b) Oligospermia (c) Teratozoospermia (d) Asthenozoospermia
- 135) Sexually transmitted diseases affecting both male and female genitals which often can rage eyes of babies born to infected mothers
(a) Syphilis (b) Gonorrhoea (c) Hepatitis (d) AIDS

- 136) Induced abortion is
 (a) IUD (b) PID (c) MTP (d) STD
- 137) Which is common match of amniotic fluid test?
 (a) IVF (b) ZIP (c) GIFT (d) None of them
- 138) The appearance of chance rashes all over if body arc symptoms of
 (a) Gonorrhoea (b) AIDS (c) Syphilis (d) Fever
- 139) Which contraceptive device makes uterus unsuited for implantation?
 (a) Progestasert (b) CUT (c) Cipple's loop (d) Multiload
- 140) Which is hormonal method of birth control?
 (a) Pill (b) IUD (c) Vasectomy (d) Femdom
- 141) After tubectomy which part of female reproductive system remains blocked
 (a) Cervix (b) Uterine cavity (c) Ovary (d) Fallopian tube
- 142) A childrens couple can be assisted to have a child through a technique called GIFT the full from on this technique is
 (a) Gamete inseminated fallopian transfer (b) Gamete intra fallopian transfer
 (c) Gamete internal fertilization and transfer (d) Germ cell internal fertilization and transfer
- 143) Transfer of an ovum of a donor into fallopian tube of a surrogate mother is
 (a) ET (b) IUT (c) GIFT (d) ZIFT
- 144) Aminocentesis is one of the methods
 (a) adapted for MTP (b) of birth control (c) for foetal sex determination (d) used for safe parturition
- 145) Lactational amenorrhoea prevernts
 (a) Secretion of milk from breast (b) Conception (c) Secretion of prolactin (d) Spermatogenesis
- 146) Sterilisation procedure in human female is
 (a) Coitus interruptus (b) Rhythm method (c) Tubectomy (d) Vasectomy
- 147) Lactational amenorrhoea means
 (a) Medical terminal of pregnancy (b) Coitus interrupts (c) Intrauterine insemination
 (d) Absence of menstruation during intense lactation.
- 148) Which is incorrect regarding vasectomy?
 (a) Irreversible sterility (b) No sperm occurs in seminal fluid (c) No sperm occurs in epididymis
 (d) vasa deferentia cut and tied
- 149) Embryo with more than 16 blastomeres formed due in vitro fertilization is transferred into
 (a) Cervix (b) Uterus (c) Fallopian tube (d) Timbriae
- 150) Which one of the following is true regarding copper releasing IUDs?
 (a) They suppress the ovulation (b) They can remain in the uterus for more than 20 years
 (c) They suppress sperm motility (d) They suppress ferliltization and conduction of zygote
- 151) Match the following and find the correct answer
- | | |
|---------------------|------------------|
| (i) Gonorrhoea | (A) 10 - 90 days |
| (ii) Syphilis | (B) 1 - 8 months |
| (iii) Genital warts | (C) 30 - 80 days |
| (iv) Hepatitis - B | (D) 2 - 5 days |
- (a) (i) - A, (ii) - B, (iii) - D (iv) - C (b) (i) - B, (ii) - C, (iii) - D (iv) - A (c) (i) - C, (ii) - D, (iii) - A (iv) - B
 (d) (i) - D, (ii) - C, (iii) - B (iv) - A
- 152) Which one of the following is not true regarding cervical cancer?
 (a) Primary prevention begins with HPV vaccination (b) Avoiding tobacco usage
 (c) Preventing early marriage (d) Practicing polygamy
- 153) What is the sex of **Drosophila**, which contains 12 autosomes and 3 'X' Chromosomes?
 (a) Male (b) Female (c) Gynandromorphs (d) Super male
- 154) Which one of the following is not a cause for infertility?
 (a) Varicocele (b) High body fat (c) Ingestion of cadmium (d) Tight clothing in man
- 155) Oligospermia is caused by
 (a) Alcoholism (b) STD (c) Damage to prostate on seminal vesicles (d) All the above

156) Match and find the correct option:

I	II
Contraceptive pill	Prevents sperms reach in female reproductive track
condom	Inhibits ovulation and implantation
vasectomy	Increases phagocytosis of sperms
copper T	blocks gamete transport

(a) a-iv, b-i, c-ii, d-iii (b) a-ii, b-i, c-iv, d-iii (c) a-i b-ii, c-iii, d-iv (d) a-ii, b-i, c-iii, d-iv

157) Assisted reproductive technology does not include

(a) Gamete intrafallopian transfer (b) Artificial insemination (c) In vitro fertilizator embryo transfer (d) Zygote extra fallopian transfer

158) Amniocentesis can diagnosis which of the following defects

(i) Trisomy
(ii) Neural tube defects
(iii) Infection
(iv) Lung maturity

(a) i, ii and iii (b) i, ii and iv (c) ii, iii and iv (d) i, ii, iii and iv

159) In which assisted reproductive technology (ART) test tube baby procedure is applied

(a) Gamete intrafallopian transfer (b) Intra cytoplasmic sperm injection
(c) Invitro fertilisation and embryo transfer (d) Zygote intrafallopian transfer

160) Which of the following statement is wrong?

(a) Test tube baby begins growth inside test tube (b) Test tube baby grows within mothers womb
(c) Test tube baby grows within surrogate mother's womb (d) Test tube baby grows following uterine

161) A sterilisation technique is

(a) Loop (b) Diaphragm (c) Tubectomy (d) Cervical cap

162) Most important component of oral contraception is

(a) Thyroxine (b) LH (c) Progesterone (d) GH

163) Match the following and final the correct combination.

Syphilis	Hhuman papilloma virus
Genital warts	HBV
Hepatitis-B	Treponema pallidum
Gonorrhoea	HSV
	Neisseria

(a) a -ii, b-i, c-iv, d-v (b) a-iii,.b-i, c-iv, d-v (c) a-iii, b-i, c-ii, d-v (d) a-ii, b-iii, c-iv, d-i

164) Select the proper hormonal composition of oral contraceptive pills _____

(a) FSH & Prolactin (b) Prolactin & TSH (c) TSH & FSH (d) FSH & LH

165) Find out the incorrect pair.

(a) Neisseria gonorrhoeae - Affects urethra (b) Hepatitis B virus - Liver cirrhosis
(c) HIV - Enlarged lymph (d) Candida albicans - Inflammation of heart

166) The permanent birth control method in males is:

(a) Appendectomy (b) Vasectomy (c) Oral contraceptives (d) Tubectomy

167) Who is the founder of Modern Eugenics movement?

(a) Mendel (b) Darwin (c) Francis Galton (d) Karl pearson

168) Improvement of human race by encouraging the healthy persons to marry early and produce large number of children is called

(a) Positive eugenics (b) Negative eugenics (c) Positive euthenics (d) Positive euphenics

169) The _____deals with the control of several inherited human diseases especially inborn errors of metabolism

(a) Euphenics (b) Eugenics (c) Euthenics (d) All of these

170) The blood group _____ is called universal donor.

(a) A (b) AB (c) B (d) O

171) The blood group _____ is called universal recipient.

(a) O (b) AB (c) B (d) A

- 172) The ABO blood group was discovered by _____.
(a) Sturli (b) Decastelle (c) Landsteiner (d) Alexander wiener
- 173) The inheritance of blood group is determined by multiple alleles as discovered by _____.
(a) Landsteiner (b) Bernstein (c) Alexander castelle (d) lyon
- 174) The _____ is called null allele.
(a) I^A (b) $I^O I^B$ (c) I^O (d) $I^B I^B$
- 175) The secretors have the I allele in _____.
(a) tears (b) Gastric juice (c) Saliva (d) All of these
- 176) _____ proposed the existence of 8 alleles at a single Rh locus.
(a) Fischer (b) Landsteiner (c) Bernstein (d) Wiener
- 177) XX - XO type of sex determination is in _____.
(a) Cockroaches (b) Drosophila (c) Humans (d) Moths
- 178) The lygaeus type (XX - XY) type of sex determination is seen in _____.
(a) Fishes (b) Chickens (c) Human beings (d) Gypsy moth
- 179) The ZO - ZZ type of sex determination is seen is _____.
(a) moths (b) Reptiles (c) Human beings (d) Bugs
- 180) The ZW - ZZ type of sex determination is seen _____.
(a) Butterflies (b) Drosophila (c) Gypsy moth (d) Human being
- 181) Sex index is applicable to _____.
(a) Homogenetic condition (b) Heterogametic condition (c) Genic balance (d) Gynandromorphs
- 182) X chromosomes was discovered by _____.
(a) Landsteiner (b) Henking (c) Stevens (d) Bridges
- 183) Y chromosomes was discovered by _____.
(a) Stevens (b) Landsteiner (c) Henking (d) Wiener
- 184) _____ was first reported by John Cotto.
(a) Erythroblastosis foetalis (b) Haemophilia (c) Colour blindness (d) Haplodiploidy
- 185) Scientists who contributed to karyotyping _____.
(a) Tjio and Levan (b) John Cotto (c) Bridges (d) Wiener
- 186) Depending on position of centromere and relative length of two arms human chromosomes can be classified into _____ type.
(a) 2 (b) 3 (c) 4 (d) 5
- 187) _____ are examples of mendelian disorders.
(a) Thalassemia (b) Albinism (c) Phenylketonuria (d) Haemophilia
- 188) _____ is a disease where abnormal haemoglobin is produced in patients.
(a) Phenylketonuria (b) Huntington's chorea (c) Thalassemia (d) Albinism
- 189) Phenylketonuria is linked to chromosome _____.
(a) 9 (b) 10 (c) 12 (d) 8
- 190) Cooley's anaemia refers to _____.
(a) Phenylketonuria (b) Haemophilia (c) Thalassemia (d) Turner's syndrome
- 191) The gene responsible for _____ is inherited as an autosomal recessive lethal gene in man
(a) Huntington's chorea (b) Albinism (c) Colourblindness (d) Phenylketonuria
- 192) _____ is an inborn error of metabolism caused due to autosomal recessive gene.
(a) Thalassemia (b) Albinism (c) Phenylketonuria (d) Huntington's chorea
- 193) Trisomy 21 refers to _____.
(a) Patau's syndrome (b) Down's syndrome (c) Kline filters syndrome (d) Turners syndrome
- 194) Patau's syndrome is called _____.
(a) Trisomy - 21 (b) Trisomy - 13 (c) xxy males (d) xo females
- 195) People with _____ have 45 chromosomes.
(a) Turner's syndrome (b) Klinefelter's syndrome (c) Down's syndrome (d) Patau's syndrome
- 196) Incompatibility of blood groups leading to, dumping of erythrocytes is called _____.
(a) agglutination (b) non -agglutination (c) Inhibition (d) repolarization
- 197) One gene 'L' controlling blood groups is named after _____.
(a) c. B. Bridges (b) Henking (c) Landsteiner (d) Stevens

- 198) The allele I^0 is called _____
(a) Dominant allele (b) multiple allele (c) null allele (d) epistatic allele
- 199) The alleles I^A and I^B are _____
(a) Hypostatic (b) Co-dominant (c) Recessive (d) Epistatic
- 200) Individuals who possess the I antigens related to gene I in body fluids are called _____.
(a) secretors (b) enzymes (c) Lymph fluids (d) hormones
- 201) Rh factor was discovered in the blood of _____.
(a) Frog (b) Carp (c) Rhesus monkey (d) Calotes
- 202) Incompatibility of Rh factor can lead to _____ in a pregnant woman.
(a) Haemophilia (b) Sickle cell anaemia (c) Aplastic anaemia (d) erythroblastosis foetalis
- 203) The XX - XY type of sex determination is also known as _____ type.
(a) Haploid - diploid (b) Lygaeus (c) Gynandromorphs (d) Genic balance
- 204) In gypsy moth we find _____ type of sex determination.
(a) ZW - ZZ (b) XX - XY (c) XX - XO (d) ZO - ZZ
- 205) Genic balance mechanism was first studied by _____.
(a) John Cotto (b) C. B. Bridges (c) Bernstein (d) Wiener
- 206) Sex switch genes have been reported in _____.
(a) Grasshopper (b) Cockroach (c) Wasp (d) Drosophila
- 207) In _____ the tissues of male and female genotype type form a mosaic
(a) Haplo-diploidy (b) Gynandromorphy (c) Genic balance (d) Lygaeus type
- 208) Sex chromatin is also called as _____.
(a) polar body (b) nucleus (c) nucleolus (d) Barr body
- 209) The number of Barr bodies follows _____.
(a) N-0 Rule (b) N-3 rule (c) N-1 rule (d) N-2 rule
- 210) Kin selection is seen in _____.
(a) Honey bees (b) Drosophila (c) Grasshopper (d) Cockroach
- 211) The fruit fly *Drosophila melanogaster* was found to be very suitable for experimental verification of chromosomal theory of inheritance by Morgan and his colleagues because
(a) It reproduces parthenogenetically (b) A single mating produces two young flies
(c) Smaller female is easily recognizable from larger male
(d) It completes the life cycle in about two weeks
- 212) Which one of the following cannot be explained on the basis of Mendel's Law of Dominance?
(a) The discrete unit controlling a particular character is called a factor
(b) Out of one pair factors one is dominant and the other recessive
(c) Alleles do not show any blending and both the characters recover as such in F₂ generation
(d) Factors occur in pairs
- 213) ABO blood groups in humans are controlled by the gene I, It has three alleles - I^A , I^B and i . Since there are three different alleles) six different genotypes are possible. How many phenotypes can occur?
(a) Three (b) One (c) Four (d) Two
- 214) Which one of the following symbols and its representation, used in human pedigree analysis is correct?
(a) \square = O Mating between relatives (b) \circ = Unaffected male (c) \square = Unaffected female
(d) \diamond = Male affected
- 215) Which one of the following conditions correctly describes the manner of determining the sex in the given example?
(a) XO type of sex chromosomes determine male sex in grasshopper
(b) XO condition in humans as found in Turner syndrome, determines female sex
(c) Homozygous sex chromosomes (XX) produce male in *Drosophila*
(d) Homozygous sex chromosomes (ZZ) determine female sex in birds
- 216) A normal-visioned man whose father was blind marries a woman whose father was also colour blind. They have their first child as a daughter. What are the chances that this child would be colour blind?
(a) 100% (b) 0% (c) 25% (d) 50%
- 217) Which of the following statements is not true of two genes that show 50 per cent recombination frequency
(a) The genes may be on different chromosomes (b) The genes are tightly linked
(c) The genes show independent assortment (d) If the genes are present on the same chromosome

218) A pleiotropic gene:

- (a) Is a gene evolved during Pliocene (b) Controls a trait only in combination with another gene
(c) Controls multiple traits in an individual (d) Is expressed only in primitive plants

219) A gene showing codominance has:

- (a) Alleles tightly linked on the same chromosome. (b) Alleles that are recessive to each other
(c) Both alleles independently expressed in the heterozygote (d) One allele dominant on the other

220) Pick out the correct statements

- a) Haemophilia is a sex-linked recessive disease
b) Down's syndrome is due to aneuploidy
c) Phenylketonuria is an autosomal recessive gene disorder
d) Sickle cell anaemia is an X-linked recessive gene disorder

- (a) a) A and D are correct (b) B and D are correct (c) A, C and D are correct
(d) A, B and C are correct

221) If a colorblind female marries a normal male, their sons will be _____

- (a) All normal visioned (b) All color blinded (c) One half normal visioned other half colorblind
(d) Three fourth colorblind one fourth normal

222) Excess hair growth on pinna is a feature noticed only in males because of _____

- (a) Males produce more testosterone
(b) gene responsible for the character is located in Y-chromosome
(c) Estrogen suppresses the character in females (d) females act only as a carriers for this character

223) ABO blood group is a classical example for _____

- (a) Multiple allelism (b) Pleiotropism (c) Incomplete dominance (d) Polygenic mechanism

224) Unit of heredity is _____

- (a) allele (b) allelomorph (c) trait (d) gene

225) Identify the proper dominance hierarchy.

- (a) $I^A=I^O > I^B$ (b) $I^A=I^B > O$ (c) $I^O=I^B > I^A$ (d) $I^B=I^A > O$

226) Identify the correct statement

- (a) Homozygous sex chromosome (XX) produce males in Drosophila
(b) Homozygous sex chromosome (ZZ) determine female sex in birds
(c) Heterozygous sex chromosome (XO) determine male sex in grasshopper
(d) Heterozygous sex chromosome (ZW) determine male sex in gypsy moth

227) Which blood group doesn't possess antibodies?

- (a) $I^A I^B$ (b) $I^O I^O$ (c) $I^A O$ (d) $I^B I^B$

228) Assertion (A): On diagnosis, Ramu is reported to have underdeveloped testis and gynaecomastia.

Reason (R): His karyotype reveals XXY condition

- (a) A is right but R is wrong (b) R explains A (c) Both A and R are wrong
(d) Both A and R are right but R is not the correct explanation of A

229) Pick out the odd man out.

- (a) Klinefelter's syndrome (b) Turner's syndrome (c) Huntington's chorea (d) 13-Trisomy

230) Pick out the odd one out regarding Mendelian disorder.

- (a) Thalassaemia (b) phenylketonuria (c) Albinism (d) Huntington's chorea

231) Identify the proper ratio of normal visioned individuals against colorblind individuals, if colorblind carrier female marries a normal male.

- (a) 1 : 1 (b) 3 : 1 (c) 1 : 3 (d) All four are normal visioned

232) Pick out the correct statement

- (i) Karyotyping helps in gender identification
(ii) Holandric genes are located on X-chromosome
(iii) Trisomy-21 is an allosomal abnormality
(iv) Cooley's anaemia is an autosomal recessive disorder

- (a) i, iii, iv are correct (b) ii and iii are correct (c) i and iv are correct (d) iv only correct



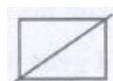
233) DOPA stands for _____

- (a) 3,4 - dihydroxy phenyl acetate (b) 3,4 - dihydroxy phenyl alanine
(c) 3,4 - dihydroxy phenyl aspartate (d) 3,4 - dihydroxy phenyl aldehyde

234) The type of antibody generated against Rh antigen is _____

- (a) IgE (b) IgG (c) A (d) IgB

235) Which of the following symbol is used in pedigree analysis to represent unspecified sex?

- (a)  (b)  (c)  (d) 

- 236) A colorblind man marries a woman with normal sight who has no history of color blindness in her family. What is the probability of their grandson being colorblind?
(a) $1/4$ (b) $3/4$ (c) $2/4$ (d) $4/4$
- 237) Multiple alleles are located _____
(a) at different loci on homologous chromosome (b) at same locus on homologous chromosome
(c) at different loci on non-homologous chromosome (d) at different chromosomes
- 238) Identify the incorrect statement regarding haplodiploidy
(a) Haplodiploidy is noticed in honeybees and drosophila (b) Unfertilized eggs develop into drones
(c) Fertilized eggs develop into queen and worker bees
(d) Males have half the total chromosomal number
- 239) I^A and I^B genes of ABO blood group are _____
(a) Co-dominant (b) Pleiotropic (c) Dominant and recessive (d) Epistatic
- 240) Which one of the following crosses show 3 : 1 ratio of normal visioned versus carrier blind?
(a) $X^C X^C \times X+Y$ (b) $X+X^c \times X^c Y-$ (c) $X+X^c \times X+Y-$ (d) $X+X+ \times X^c Y-$
- 241) 21st trisomy is observed in
(a) Down's syndrome (b) Patau's syndrome (c) Turner's syndrome (d) Klinefelter's syndrome
- 242) Father of genetics is
(a) Morgan (b) Darwin (c) Mendel (d) Hutchinson
- 243) An organism with two unlike genes of a trait is called
(a) Heterozygous (b) Homozygous (c) Hermaphrodite (d) Monozygous
- 244) In heritage of skin colour in man
(a) Monogenic B (b) Bigenic (c) Trigenic (d) polygenic
- 245) A gamete contains
(a) only one allele of a gene (b) two alleles of a gene (c) all alleles of a gene (d) none of the above
- 246) Human blood groups are determined by
(a) single gene (b) two genes (c) alleles (d) multiple genes
- 247) An important example of pleiotropy is
(a) bleeder's disease (b) small pox (c) sickle cell anaemia (d) none of the above
- 248) An organism with two identical alleles of a gene in a cell is called
(a) hybrid (b) heterozygous (c) dominant (d) homozygous
- 249) When an individual possesses both alleles of contrasting characters it is called
(a) Dioecious (b) Linked genes (c) Heterozygous (d) Homozygous
- 250) If a couple has three daughters, what are the chances that the fourth child will be a son
(a) 100% (b) 75% (c) 50% (d) 0%
- 251) Which of the following is controlled by multiple alleles?
(a) Sickle cell Anaemia (b) Colour blindness (c) Phenylketonuria (d) Blood groups
- 252) Inheritance of ABO group shows
(a) Polygeny (b) Polyploidy (c) Multiple allelism (d) Incomplete dominance
- 253) The inheritance of two recessive alleles for the sickle cell trait is commonly
(a) Lethal (b) Epistatic (c) Heterozygous (d) Homozygous
- 254) The number of chromosomes in drosophila melanogaster is
(a) 6 (b) 8 (c) 10 (d) 12
- 255) Homosapiens has
(a) 23 pairs of chromosomes (b) 24 pairs of chromosomes (c) 25 pairs of chromosomes
(d) 26 pairs of chromosomes
- 256) The prokaryotic chromosomes are founds in
(a) Bacillus (b) Nostoc (c) Escherichia (d) All of the above
- 257) Extra chromosomal hereditary determinants are known as
(a) Plastids (b) Ribosomes (c) Plasmids (d) None of the above
- 258) Eukaryotic chromosomes are found in
(a) Cyanobacteria (b) Blue-Green algae (c) Fungi (d) None of the above
- 259) The term mutation was introduced by
(a) Mendel (b) Hugo de Vries (c) Darwin (d) Lamarck

- 260) Point mutations are caused by
(a) Substitution (b) Deletion (c) Insertion (d) All of the above
- 261) Allosomes are
(a) Mode like structures on chromosomes (b) Sex chromosome (c) Rounded bodies on chromosome
(d) None of the above
- 262) Drosophila having one half of the body as male and the other half as female is called
(a) Hermaphrodite (b) Androphore (c) Protandrous (d) Gynomorph
- 263) Mutation is
(a) a change that inherited (b) a change, but not inherited (c) a factor responsible for plant growth
(d) a change affecting F₂ generation only
- 264) H.J Muller was awarded Nobel Prize in 1946 for his work on
(a) Human cancer (b) Mechanism of protein synthesis (c) Chemistry of nucleic acids
(d) X-rays mutation in Drosophila
- 265) When the chromosome number is different than a multiple of basic chromosome number, it is called
(a) Aneuploidy (b) Monoploidy (c) Diploidy (d) Polyploidy
- 266) Kappa particles indicate
(a) Cytoplasmic inheritance (b) Nuclear inheritance (c) Nucleo-cytoplasmic inheritance
(d) Mutations
- 267) Genes located on Y-chromosomes are called
(a) Hobandric genes (b) Sex linked genes (c) Mutant genes (d) Autosomal genes
- 268) Barr body is derived from
(a) Autosomes in males (b) Autosomes in females (c) X-chromosomes in males
(d) X-chromosomes in females
- 269) Trisomic condition in Down's syndrome is mainly due to
(a) Diploidy (b) non - disjunction (c) Translocation (d) triploidy
- 270) Limnaea peregra is a
(a) freshwater snail (b) marine water snail (c) both a & b (d) none of the above
- 271) Which is not a gene linked disease?
(a) Haemophilia (b) Daltonism (c) Myxodema (d) Alkaptonuria
- 272) Lyon's hypothesis is connected with
(a) Number of barr bodies (b) Genetic compatibility (c) Genetic compatibility
(d) Centromere position
- 273) Turners syndrome is represented by
(a) XYY (b) XO (c) XXY (d) XXX
- 274) Male sterility was discovered by
(a) Rhoades (b) Sonneborn (c) Bycottetal (d) Correns
- 275) Crytoplasmic inheritance differs from nuclear inheritance in the absence of
(a) Similarity of reciprocal crosses (b) Biparental contribution (c) Effect on back crossing
(d) All the above
- 276) Length of Y-chromosome is
(a) 2.0 μm (b) 3.0 μm (c) 4.0 μm (d) 5.0 μm
- 277) In super male XXY is characterised by
(a) Under production of sex hormones (b) Over production of sex hormones
(c) Reduced intelligence but aggressive nature (d) Both b and c
- 278) A haemophilia man marries a homozygous normal woman What would be the possible condition to their children
(a) Sons would be normal but daughters would be sufferer.
(b) Sons would be sufferer but daughters would be normal
(c) Both sons and daughters would be normal
(d) Both sons and daughters would be normal but daughters would be carrier
- 279) Find out the incorrect pair
(a) Cheese - Lactococcus (b) Curd - Saccharomyces cerevisiae (c) Idli - Leuconostoc mesenteroids
(d) Bread - Yeast
- 280) Which of the following chromosome has the highest gene density
(a) Chromosome 'Y' (b) Chromosome 1 (c) Chromosome 19 (d) Chromosome 13

- 281) B- blood group man marries A- blood group women the child has B- blood group genotype of the child is
(a) $I^A I^O$ (b) $I^B I^O$ (c) $I^A I^B$ (d) $I^B I^B$
- 282) Height in humans is
(a) Somatogenic variation (b) Discontinuous variation (c) Continuous variation (d) Both B and C
- 283) Which blood group can safely be transfused in emergency when there is no time to analyse the blood group of recipient?
(a) O and Rh⁻ (b) O and Rh⁺ (c) B and Rh⁻ (d) AB and Rh⁺
- 284) A baby of blood group A cannot belong to parents blood group
(a) Husband O, Wife AB (b) Husband A, Wife B (c) Husband B, Wife O (d) Husband AB, Wife A
- 285) Possible blood group of children born to parents having A and AB groups are
(a) O, A (b) A, B, AB (c) O, A, B (d) O, A, B, AB
- 286) Blood group A person can
(a) be parent of a child with B blood group (b) possess only B-antigen
(c) safely receive blood from a donor of B-group (d) possess both antigens A and B
- 287) In heterogeneous conditions, both the alleles express in
(a) Colour blindness (b) AB blood group (c) Rh factor (d) A and B blood types
- 288) ABO blood grouping in humans is an example of
(a) Polygenic inheritance (b) Multiple allelism (c) Pleiotropism (d) Incomplete dominance
- 289) Children of a father with 'O' blood group and mother with 'AB' blood group would be
(a) O (b) AB (c) O or AB (d) A or B
- 290) Biological unit controlling heredity is
(a) Genome (b) Chromosome (c) Genotype (d) Gene
- 291) Name the scientist(s) who rediscovered the Mendelian work?
(i) Hugo de Vries
(ii) Carl Correns
(iii) Tschermak
(iv) T.H. Morgan
(a) i and iv (b) i, ii and iv (c) i, ii and iii (d) ii, iii and iv
- 292) Which is not a feature of the chromosomal theory of inheritance?
(a) Somatic cells of organisms are derived from zygote by repeated meiosis.
(b) Chromosomes retain their structural uniqueness throughout the life of an organism.
(c) Mendelian factors are located in chromosomes
(d) Sutton and Boveri independently proposed the theory.
- 293) The following sequence represents the location of genes in a chromosome. A - B - C - M - R - S - y - Z.
Which of the gene pairs will have least chance of getting inherited together?
(a) A and M (b) Sand Y (c) M and Z (d) A and Y
- 294) Number of chromosomes (2n) in Ophioglossum is _____
(a) 1226 (b) 1622 (c) 1262 (d) 2126
- 295) Identify the syntenic gene from the given genes sequence of a chromosome G-H-I-J-K-L-M-A-B
(a) G and H (b) J, K and L (c) G and B (d) A and B
- 296) Incomplete linkage was reported by Hutchinson in _____
(a) Drosophila (b) Maize (c) Neurospora (d) Lathyrus odoratus
- 297) Mechanism of crossing over involves the following stages. Select the correct sequence.
(a) Tetrad stage ~ Synapsis ~ Bivalent stage ~ cross over
(b) Syndesis ~ Tetrad ~ Crossing over ~ Terminalisation
(c) Terminalisation ~ Tetrad ~ Bivalent ~ Cross over
(d) Cross over ~ Bivalent ~ Tetrad ~ Terminalisation
- 298) During cross over, chiasma occurs between
(a) Sister chromatids of non-homologous chromosomes
(b) Non-sister chromatids of non-homologous chromosomes
(c) Non-sister chromatids of homologous chromosomes
(d) Sister chromatids of homologous chromosomes
- 299) At which stage of meiosis, does the chromosomes undergo recombination process
(a) Leptotene stage of prophase I (b) Zygotene stage of prophase I (c) Diplotene stage of prophase I
(d) Pachytene stage of prophase I

- 300) Which of the following statement(s) is/are wrong with respect to Recombination process?
(i) Mitotic crossing over occurs rarely in somatic cells.
(ii) Syndesis refers to pairing of non-homologous chromosome.
(iii) Procentric synapsis starts from telomeres.
(iv) A Bivalent has four chromatids.
(a) i and iv (b) ii and i (c) ii and iii (d) All the above
- 301) Recombination frequency (RF) is equal to
(a) $\frac{\text{No. of offspring}}{\text{No. of recombinants}} \times 100$ (b) $\frac{\text{No. of recombinants}}{\text{No. of parental strains}} \times 100$ (c) $\frac{\text{No. of recombinants}}{\text{No. of offspring}} \times 100$
(d) $\frac{\text{No. of offspring}}{\text{No. of parental strains}} \times 100$
- 302) In a population of 250 progenies produced, only 120 resemble the parental forms. Calculate the recombinant frequency.
(a) 66% (b) 52% (c) 59% (d) 49%
- 303) Mutation theory was proposed by _____
(a) T. H. Morgan (b) Hugo de Vries (c) Alfred Sturtevant (d) Sutton and Boveri
- 304) Identify the mutant variety of castor.
(a) Sharbathi Sonora variety (b) Aruna variety (c) Reimei variety (d) Erectiform variety
- 305) Which is not a non-ionizing radiation?
(a) X-rays (b) Gamma rays (c) Alpha rays (d) UV rays
- 306) Transition type of gene mutation is caused when _____
(a) AC is replaced by GT (b) AG is replaced by TC (c) AC is replaced by TG (d) TC is replaced by AG
- 307) Pick out the co-mutagen from the following:
(a) Eosin (b) Mustard gas (c) Ascorbic acid (d) Nitrous acid
- 308) Sharbathi Sonara is a mutant wheat variety which is developed by irradiating the seeds with _____
(a) Thermal neutrons (b) Gamma radiation (c) X-rays (d) UV radiations
- 309) Which one of the following ploidy is irrelevant to others?
(a) Monosomy (b) Trisomy (c) Tetrasomy (d) Pentasomy
- 310) Statement 1: Euploidy involves entire sets of chromosomes
Statement 2: Aneuploidy involves individual chromosomes within a diploid set.
(a) Statement 1 is correct and Statement 2 is incorrect
(b) Statement 1 is incorrect and Statement 2 is correct (c) Both the statements are correct
(d) Both the statements are incorrect
- 311) Statement 1: In transversion mutation, single purine is changed to pyrimidine.
Statement 2: In transition mutation, a purine replaced by another purine.
(a) Statement 1 is correct and Statement 2 is incorrect
(b) Statement 1 is incorrect and Statement 2 is correct (c) Both the statements are correct
(d) Both the statements are incorrect
- 312) Statement 1: Pairing of homologous chromosome is called as syndesis.
Statement 2: Proterminal synapsis occurs from telomeres.
(a) Statement 1 is correct and Statement 2 is incorrect
(b) Statement 1 is incorrect and Statement 2 is correct (c) Both the statements are correct
(d) Both the statements are incorrect
- 313) Statement 1: The widely accepted DNA replication model is Holliday's hybrid DNA model.
Statement 2: The vertical cut in the DNA results in heteroduplex with non-recombinants.
(a) Statement 1 is correct and Statement 2 is incorrect
(b) Statement 1 is incorrect and Statement 2 is correct (c) Both the statements are correct
(d) Both the statements are incorrect
- 314) Statement 1: Self-sterility in Nicotiana is controlled by multiple alleles.
Statement 2: Multiple alleles are always responsible for the same character.
(a) Statement 1 is correct and Statement 2 is incorrect
(b) Statement 1 is incorrect and Statement 2 is correct (c) Both the statements are correct
(d) Both the statements are incorrect
- 315) One of the following is not the kind of euploidy
(a) Diploidy (b) Polyploidy (c) Hyperploidy (d) Autopolloidy
- 316) The chromosomal condition $2n - 2$ represents
(a) Monosomy (b) Nullisomy (c) Trisomy (d) Tetrasomy
- 317) Identify the autotriploid plant
(a) Potato (b) Coffee (c) Ground nut (d) Apple

- 318) Assertion (A): Polyploidy is common in plants.
Reason (R): Polyploids possess more than 2 basic sets of chromosomes.
(a) A is true R is false (b) Both A and R are false (c) A is true, R is not correct explanation for A
(d) R explains A
- 319) Assertion (A): Complete linkage is noticed in male species of Drosophila.
Reason (R): Completely linked genes show some crossing over.
(a) A is true R is false (b) Both A and R are false (c) A is true, R is not correct explanation for A
(d) R explains A
- 320) Assertion (A): Self-sterility is observed in Nicotiana species.
Reason (R): Because the genes are located on chromosome.
(a) A is true R is false (b) Both A and R are false (c) A is true, R is not correct explanation for A
(d) R explains A
- 321) Observe the gene sequence and identify the types of aberration ABC BCD E F?
(a) Tandem duplication (b) Simple duplication (c) Reverse tandem duplication
(d) Displaced tandem duplication
- 322) The chromosome theory of inheritance violated which of the following laws
(a) Law of dominance (b) Law of segregation (c) Law of independent assortment (d) None
- 323) A cross is made between a white eyed female Drosophila, with a red eyed male drosophila, what will the colour of eyes for their male and female offspring
(a) Both red eye (b) Both white eye (c) Red eyed female and white eyed male
(d) Red eyed male and white eyed female
- 324) If a gamete has 16 chromosomes what will be the number of chromatids before anaphase 1?
(a) 8 (b) 16 (c) 32 (d) 64
- 325) The theory of recombination of linked gene due to crossing over chromosome was put forwarded by
(a) Mendel (b) T.H. Morgan (c) T. Boveri (d) W.S. Sutton
- 326) Percentage of recombination between A and B is 10% and A and C 18% anti B and C is 25%, then the arrangement of genes is
(a) ABC (b) ACB (c) BCA (d) BAC
- 327) Genes which are located on the same chromosome are
(a) Mutant genes (b) Codominant (c) Linked to each other (d) Allelic to each other
- 328) Intimate pairing between two homologous chromosomes is initiated during which stage of prophase 1 of meiosis
(a) Zygotene (b) Leptotene (c) Pachytene (d) Diplotene
- 329) The concept of gene mapping was first developed by
(a) T.H. Morgan (b) Alfred H Stutevant (c) Robin Holliday (d) Hutchinson
- 330) In order to calculate map distance of genes on a chromosome, this has to be considered
(a) Number of mutant genes (b) Cross over percentage
(c) Recombination frequency of each gene locus (d) Non cross over percentage
- 331) Find out the incorrect statement.
(a) Genetic map - ordered list of genetic loci along a particular chromosome.
(b) Frequency of crossing over - related to the distance between genes.
(c) Genes farther apart on a chromosome - more likely to be separated during crossing over.
(d) Linked genes - have recombination frequencies more than 50%
- 332) The no. of linkage groups in sweet pea is
(a) 7 (b) 2 (c) 4 (d) 10
- 333) In Nicotiana plant, in which one of the following cross made between seed parent and pollen parent, all the pollens are effective, resulting in four kinds of progenies.
(a) $S_1S_2 \times S_1S_2$ (b) $S_1S_2 \times S_2S_3$ (c) $S_3S_4 \times S_1S_2$ (d) $S_2S_3 \times S_2S_3$
- 334) Which one of the following genotypes induces maleness in Papaya?
(a) mm (b) M_1m (c) M_2m (d) M_1M_2
- 335) If the genes are located in a chromosome as A-B-C-D-E--O--T. Which of the gene pairs have least probability of inherited together?
(a) C and D (b) A and T (c) A and B (d) O and T
- 336) Cyanodan dactylon is a
(a) Manmade auto triploid (b) Natural auto triploid (c) Auto tetraploid (d) Pentaploid
- 337) Which one of the following, can enhance the effects of known mutagen?
(a) Mustard gas (b) Eosine (c) Ethrosine (d) Caffeine

338) Point mutation involves

- (a) Insertion (b) Change in single base pairs (c) Duplication (d) Deletion

339) Find out the incorrect statements

- (1) Change in amino acid encoded in silent mutation
 (2) No change in amino acid encoded in missense mutation
 (3) Non sense mutation creates translational termination codon
 (4) Frame shift mutation - shifts triplet reading of codons out of correct phase

- (a) Both (1) and (2) (b) Both (2) and (3) (c) Both (3) and (4) (d) (2) only

340) Select the correct order of the series, with regard to the number of chromosomes found in Ophioglossum Giant Sequoia, Equisetum and Arabidopsis.

- (a) 22, 216, 10, 1262 (b) 216, 10, 1262, 22 (c) 10, 1262, 22, 216 (d) 1262, 22, 216, 10

341) Match the column I and column II with regard to the types of mutations classified and their major features

column I	column II
A Gain of function	1. increases normal function
B. Loss of function	2. Reduces normal function
C. Hyper morphic	3. Eliminate normal function
D. Hypo morphic	4. Expressed at incorrect time

- (a) A-3 B-4 C-2 D-1 (b) A-4 B-3 C-1 D-2 (c) A-2 B-1 C-3 D-4 (d) A-1 B-2 C-4 D-3

342) Observe the following statement.

1. An organism which possessed two or more basic sets of chromosome derived from two different species called allopolyploidy.
 2. The F₁ hybrid obtained from cross between Triticum durum and secale cereale is a fertile one of these.

- (a) 1 Correct 2 Wrong (b) 1 Wrong 2 Correct (c) 1 Wrong 2 Wrong (d) 1 Correct 2 Correct

343) The genotype of colourless full seed in maize seed is

- (a) CS CS (b) Cs Cs (c) cS cS (d) cs cs

344) In maize plant, if it has to have both tassel and cob, the genotype must be

- (a) ba / ba ts / ts (b) ba / ba ts⁺ / ts⁺ (c) ba⁺ ba⁺ / ts⁺ / ts⁺ (d) ba⁺ ba⁺ / ts / ts

345) The transfer of a segment of chromosome to a non-homogeneous chromosome is called _____

- (a) Crossing over (b) Translocation (c) Linkage (d) Duplication

346) Match the following and find the correct answer:

i) Pentasomy	A) - 2n - 2
ii) Double monosomy	B) - 2n + 1
iii) Nullisomy	C) -2n - 1 - 1
iv) Trisomy	D) - 2n + 3

- (a) (i)-C, (ii)-D, (iii)-B, (iv)-A (b) (i)-B, (ii)-C, (iii)-D, (iv)-A (c) (i)-C, (ii)-B, (iii)-A, (iv)-D
 (d) (i)-D, (ii)-C, (iii)-A, (iv)-B

347) When red eyed female drosophila is crossed with white-eyed male, the F₁ offsprings would be

- (a) Females are with white eye and males are with red eye
 (b) Males are with red eye and females are with yellow eye
 (c) Both males and females are with red eye (d) Both males and females are with white eyes

348) How can we reverse the sterility of F₁ hybrid?

- (a) Genetic Engineering (b) Protoplasmic fusion (c) Induced Mutation
 (d) Induce chromosomal abberation

349) In a male gametophyte, the chromosomal number of generative nucleus is (A) and tube nucleus is (B)

- (a) (A) - (n) (B) - (2n) (b) (A) - (2n) (B) - (n) (c) (A) - (2n) (B) - (2n) (d) (A) - (n) (B) - (nn)

350) Which one of the following is incorrect regarding chromosomal behaviour during cell division?

- (a) The alleles of a genotype are found in the some locus of a homologous chromosome
 (b) In the S phase of meiotic interphase each chromosome replicates forming two copies of each allele, one on each chromatid
 (c) The homologous chromosomes segregate in metaphase I, thereby separating two different alleles
 (d) In anaphase II of meiosis, separation of sister chromatid of homologous chromosomes takes place.

351) If haploid number in a cell is 23. the double monosomic and pentasomy number will be

- (a) 44 and 49 (b) 17 and 34 (c) 47 and 46 (d) 45 and 48

- 352) If there are 999 bases in an RNA that codes for a protein with 333 amino acid and the base at position 901 is deleted such that the length of the RNA becomes 998 bases, how many codons will be altered?
(a) 1 (b) 11 (c) 33 (d) 333
- 353) In a mutational event when adenine is replaced by guanine, it is the case of
(a) Frameshift mutatin (b) Transcription (c) Transition (d) Transversion
- 354) Mutations can be induced with
(a) Gamma radiations (b) Infrared radiations (c) IAA (d) Ethylene
- 355) The mechanism that causes a gene to move from one linkage group to another is called
(a) Translocation (b) Crossing over (c) Inversion (d) Duplication
- 356) A point mutation comprising the substitution of a purine by pyrimidine is called
(a) Transition (b) Translocation (c) Deletion (d) Transversion
- 357) Frameshift mutation occurs when
(a) Base is substituted (b) base is deleted or added (c) Anticodons are absent (d) None of these
- 358) The distance between two genes in a chromosome is measured in cross-over units which represent
(a) Ratio of crossing over between them (b) Percentage of crossing over between them
(c) Number of crossing over between them (d) None of these
- 359) Genetic map is one that
(a) Establish sites of the genes on a chromosome (b) Establishes the various stages in gene evolution
(c) Shows the stages during the cell division (d) Shows the distribution of various species in a region
- 360) After a mutation at a genetic locus of the character of an organism changes due to the change in
(a) DNA replication (b) Protein synthesis pattern (c) RNA transcription pattern
(d) Protein structure
- 361) In a hexaploidy wheat, the haploid (n) and basic (x) numbers of chromosomes are
(a) $n = 21$ and $x = 7$ (b) $n = 7$ and $x = 21$ (c) $n = 21$ and $x = 21$ (d) $n = 21$ and $x = 14$
- 362) Which one of the following is a wrong statement regarding mutations?
(a) UV and Gamma rays are mutagens
(b) Change in a single base pair of DNA does not cause mutation
(c) Deletion and insertion of base pairs cause frame shift mutations.
(d) Cancer cells commonly show chromosomal aberrations.
- 363) Which of the following statement is not true of two genes that show 50% recombination frequency?
(a) The genes may be on different chromosomes (b) The genes are tightly linked
(c) The genes show independent assortment
(d) If the genes are present on the same chromosome, they undergo more than one crossover in every meiosis
- 364) Haploids are more suitable for mutation studies than the diploids. This is because
(a) All mutations, whether dominant or recessive are expressed in haploids
(b) Haploids are reproductively more stable than diploids
(c) Mutagens penetrate in haploids more effectively than diploids
(d) Haploids are more abundant in nature than diploids
- 365) Crossing over that results in genetic recombination in higher organisms occurs between
(a) Non-sister chromatids of a bivalent (b) Two daughter nuclei (c) Two different bivalents
(d) Sister chromatids of bivalents
- 366) The reason for the selection of fruit fly T.H. Morgan are
(a) a single mating could produce a large number of progeny flies
(b) there was a clear cut differentiation of sexes easily distinguishable
(c) many types of hereditary variations that can be seen with low Power microscope
(a) a & b correct (b) a & c correct (c) b & c correct (d) a, b, & c correct
- 367) The ratio obtained by Morgan with linkage in coupling is
(a) 9:3:3:1 (b) 1:1:1:1 (c) 7:1:1:7 (d) 1:7:7:1
- 368) Mutations do not arise by
(a) Chemical factors (b) Physical factors (c) Sociological factors (d) Biological factors
- 369) Change in a single base pair of DNA is called
(a) Frame shift mutations (b) Point mutations (c) Chromosome aberration (d) Gene aberration
- 370) The term allele was coined by
(a) Mendel (b) Bateson (c) Watson (d) Morgan

ASSERTION REASON

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371) **Assertion:** STD can be prevented by Monogamy

Reason: TNHSP, a unit of Health and family welfare development of Government of Tamil Nadu does free screening for cervical and breast cancer

Codes:

- (a) A and R correct, R is the correct explanation of A
- (b) A and R right but R is not the correct explanation of A
- (c) A is correct R is false
- (d) Both A & R are false

372) **Assertion:** MTP during the second trimester is risky for the parent & foetus.

Reason: It must be performed by trained medical personnel.

Codes:

- (a) A and R correct, R is the correct explanation of A
- (b) A and R right but R is not the correct explanation of A
- (c) A is correct R is false
- (d) Both A & R are false

373) **Assertion:** Oral contraceptives are not recommended for birth control.

Reason: Surgical sterilisation is the best birth control method for all age groups.

Codes:

- (a) A and R correct, R is the correct explanation of A
- (b) A and R right but R is not the correct explanation of A
- (c) A is correct R is false
- (d) Both A & R are false

374) **Assertion:** Vitamin E helps in the normal functioning of reproductive structures in man.

Reason: Vitamin E is known as anti sterility vitamin.

Codes:

- (a) A and R correct, R is the correct explanation of A
- (b) A and R right but R is not the correct explanation of A
- (c) A is correct R is false
- (d) Both A & R are false

375) **Assertion:** Condoms safeguards the user from AIDS and STDs

Reason: Condoms are made of polyunthane, latex and lambskin.

Codes:

- (a) A and R correct, R is the correct explanation of A
- (b) A and R right but R is not the correct explanation of A
- (c) A is correct R is false
- (d) Both A & R are false

376) **Assertion (A):** IUD's are inserted in the ovary.

Reason (R): IUD's Increases phagocytosis of the sperm.

Codes:

- (a) Both A and R are correct
- (b) Both A and R are incorrect
- (c) A is correct R is incorrect
- (d) A is incorrect R is correct

377) **Assertion (A):** Amniocentesis helps to diagnose the chromosomal aberrations in foetus.

Reason (R): Amniocentesis is legalized in our country.

Codes:

- (a) Both A and R are wrong
- (b) A is right and R is wrong
- (c) R explains A
- (d) A is wrong R is right

378) **Assertion:** LNG - 20 are often called as hormone releasing intrauterine systems (IUS).

Reason: They increase the viscosity of the cervical mucus and thereby prevent sperms from entering the cervix. (QY-2019)

Codes:

- (a) (A) is true, (R) is false
- (b) Both (A) and (R) are true (R) is the correct explanation of (A)
- (c) (A) is false, (R) is true
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A)

379) **Assertion (A) :** Tubectomy is the surgical sterilization in women

Reason (R) : It blocks the transport of the gametes and prevents conception.

Codes:

- (a) (A) Correct; (R) Wrong
- (b) (A) Wrong; (R) Correct
- (c) (A) Correct; but (R) does not explain (A)
- (d) (A) Correct; (R) explains (A)

380) **Assertion:** Periodic abstinence is a natural method where couples abstain from coitus.

Reasons : Coitus from days 5-10 should be avoided because this is the time of ovulation.

Codes:

- (a) Both are true but reason is not correct explanation.
- (b) Assertion is true but reason is wrong
- (c) Both are wrong
- (d) Both are correct, reason is correct explanation.

381) Read the statements A and 'B' and identify the correct option

Statement A: Women are at the peak of conception on the 14th day of ovulation.

Statement B: Vasectomy is a method normally employed to avoid conception in females.

Codes:

- (a) Statement 'A' is wrong 'B' is right.
- (b) Statement 'a' is right 'b' is wrong.
- (c) Both the statements are right
- (d) Both the statements are wrong

382) **Assertion:** ABO Blood grouping is based on multiple alleles.

Reason: There are 6 possible genotypes and 4 possible blood types

Codes:

- A. A and R are true, R is the correct explanation of A.
- B. A and R are true, R is not the correct explanation of A.
- C. A is true, R is false.
- D. Both A and R are false.

383) **Assertion:** The Kappa in paramecium appears to be a bacterium.

Reason: Kappa particles are not dependent on the chromosomal genes

Codes:

- A. A and R are true, R is the correct explanation of A.
- B. A and R are true, R is not the correct explanation of A.
- C. A is true, R is false.
- D. Both A and R are false.

384) **Assertion:** Phenylketonuria occurs due to the mutation in gene PAH on chromosome 11.

Reason: DOPA is not converted to melanin

Codes:

- A. A and R are true, R is the correct explanation of A.
- B. A and R are true, R is not the correct explanation of A.
- C. A is true, R is false.
- D. Both A and R are false.

385) **Assertion (A) :** XX-XO type of sex determination is seen in bedbugs cockroaches and grass hoppers.

Reason (R) : The sex of the offspring depends upon the egg

Codes:

- (a) Both (A) and (R) are true and (R) is not the correct explanation for (A).
- (b) Both (A) and (R) are false.
- (c) (A) is true and (R) is false.
- (d) Both (A) and (R) are true and (R) is the correct explanation for (A)

386) **Assertion (A):** Increase in temperature decreases the rate of mutation.

Reason (R): rise in temperature, breaks the hydrogen bonds between two DNA nucleotides which effects the process of replication and transcription

Codes:

- (a) A is not correct R is correct
- (b) A is correct R is not correct
- (c) A is correct R is correct
- (d) Both A and R are wrong

387) **Assertion:** Multiple alleles of a series always occupy the same locus in the homologous chromosome.

Reason: Therefore no crossing over occurs within the alleles of a series.

Codes:

- (a) Assertion correct Reason not correct
- (b) Assertion correct Reason correct
- (c) Assertion wrong Reason correct
- (d) Both assertion and Reason are wrong

FIND WRONG PAIR

5 x 2 = 10

388) (i) Chemotherapy	Cervical cancer
(ii) IVF	Egg retrieval
(iii) Contraceptive	Infertility
(iv) Cryopreservation	Avoid ovarian stimulation

- (a) iii only
- (b) ii, and iv
- (c) iv
- (d) i and iv only

389) (i) Doppler device	Foetal heart
(ii) NACO	Family planning
(iii) 4 - D ultrasound	Early pregnancy
(iv) Herpes simplex	Enlarged lymph nodes

- (a) i and iv
- (b) ii, and iv
- (c) i and iii
- (d) iii and iv

390) (i) Non-medicated IUD	Lippes loop
(ii) Saheli	Plastic loop
(iii) Hormone releasing IUD	Progestasert
(iv) Copper releasing IUD	Multi load 375

- (a) i and iv
- (b) ii
- (c) i and iii
- (d) iii and iv

391) i) Down's syndrome	-Trisomy 13
ii) Shell coiling in snail	-Cytoplasmic inheritance
iii) Kappa particle	-Sonneborn
iv) Eugenics	-Galton

- (a) i and iv
- (b) i only
- (c) ii and iii
- (d) i, ii and iv

392) i) SRY	-X Chromosome
ii) Heterogametic female	-XX-XO
iii) Barr body	-Sex Chromatin
iv) Rh factor	-Landsteiner

- (a) i and iv
- (b) ii and iii and iv
- (c) ii only
- (d) i and ii

ODD OUT

- 393) (a) Saheli
- (b) CuT-380
- (c) LNG - 20
- (d) GnRH

- 394) (a) IUD
- (b) ICSI
- (c) Vasectomy
- (d) IUS

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