

## REPEATERS EXAM

### BIOLOGY

1. Which among the following is/are correct?
  - a) Single celled organisms are immortal
  - b) When offspring is produced by a single parent with or without the involvement of gamete formation the reproduction is asexual
  - c) Zoospores are non-motile asexual spores
  - d) All except c is correct
2. Consider the statements and choose wrong one
  - a) Date palms are homothallic
  - b) Cockroach is a hermaphrodite
  - c) In all organisms meiocytes undergo meiosis
  - d) b & c
3. The parthenogenesis is not found in
  - a) Rotifers
  - b) Turkey
  - c) Honeybees
  - d) None of the above
4. In animals juvenile phase is followed by
  - a) Vegetative phase
  - b) Reproductive phase
  - c) Senescent phase
  - d) Old age
5. Which among the following statement is wrong
  - a) A haploid parent produces gametes by mitosis only
  - b) Meiosis never occurs in haploid organisms
  - c) If the male and female flowers present on the same it is said to be monoecious
  - d) Both b & c are wrong
6. Find out the mismatched pair of organism and chromosome number in meiocytes
  - a) Dog – 78
  - b) Maize – 20
  - c) Potato – 24
  - d) Onion – 32
7. Which of the following is a hermaphrodite
  - a) Ant
  - b) Aphids
  - c) Earth worms
  - d) Cockroach
8. A few statement describing certain features of reproduction are given below
  - i) Gametic fusion takes place
  - ii) Transfer of genetic material takes place
  - iii) Reduction division takes place
  - iv) Progeny have some resemblance with parents
 Select the options that are true for both asexual and sexual reproduction
  - a) i & ii
  - b) ii & iii
  - c) ii & iv
  - d) i & ii
  - e) None of these
9. The male gametes of rice plant have 12 chromosomes in this nucleus. The chromosome number in the female gamete, zygote and the cells of the seedling will be respectively
  - a) 12, 24, 12
  - b) 24, 12, 12
  - c) 12, 24, 24
  - d) 24, 12, 24
10. Heterogametes are found in
  - a) Cladophora
  - b) Fucus
  - c) Paramoecium
  - d) Amoeba
11. The male accessory glands include
  - a) Rete testes, seminal vesicles, prostate gland
  - b) Vas deferens, rete testes, epididymis
  - c) Seminal vesicles, bulbourethral gland, prostate gland
  - d) Bulbourethral gland, vas deferens, seminal vesicles
12. In humans, at the end of the first meiotic division, the male germ cells differentiate into the
  - a) Spermatids
  - b) Spermatogonia
  - c) Primary spermatocytes
  - d) Secondary spermatocytes
13. The number of sperms produced from 24 secondary spermatocytes will be:
  - a) 24
  - b) 48
  - c) 12
  - d) 96
14. During gametogenesis in males,
  - a) LH stimulates the secretion of two gonadotrophins
  - b) FSH acts on leydig cells to stimulate spermatogenesis
  - c) Androgens secrete some factors which help in oogenesis
  - d) FSH plays an important role in regulating spermiogenesis
15. Which one of the following events is correctly matched with the time period in a normal menstrual cycle?
  - a) Release of egg : 5<sup>th</sup> day
  - b) Endometrium regenerates : 5-10days
  - c) Endometrium secretes nutrients for implantation : 1- 3 days
  - d) Rise in progesterone level : 1 – 15 days
16. Some important events in the human female reproductive cycle are given below. Arrange the events in a proper sequence. A-secretion of FSH, B-growth of corpus luteum, C-growth of the follicle and oogenesis, D-ovulation, E-sudden increase in the levels of LH
  - a) A D C E B
  - b) B A C D E
  - c) C A D B E
  - d) A C E D B
17. The phase of menstrual cycle in humans that happened in middle of menstrual; cycle
  - a) Follicular phase
  - b) Ovulatory phase
  - c) Luteal phase
  - d) Menstruation
18. What is true of natural methods of contraception ?
  - a) They increase phagocytosis of sperms
  - b) They employ barriers to prevent fertilization
  - c) They are natural ways of avoiding chances of fertilization
  - d) They are surgical methods and are terminal methods
19. Choose the incorrect statements from those given below
  - a) Mons pubis is a cushion of fatty tissue covered by skin and pubic hair
  - b) Labia majora are fleshy folds of tissue surrounding the vaginal cavity
  - c) Labia majora are paired folds of tissue under labia minora
  - d) Opening of vagina is often covered partially by hymen
20. Choose the wrong statement from the following
  - a) Primary oocyte grows in size inside the secondary follicle
  - b) LH stimulates secretion of androgens
  - c) Androgens stimulate spermatogenesis
  - d)FSH stimulate secretion of some factors for spermiogenesis
21. Select the false statement
  - a) Tapetum cells possess dense cytoplasm
  - b) Sporogenous tissue occupies centre of anther
  - c) Each cell of sporogenous tissue is called PMC
  - d) After microsporogenesis microspores are arranged as tetrad



48. HD 1553 is a variety of
- Wheat - Kalyansona
  - Wheat - Sonalika
  - Rice - Jaya
  - Rice - Ratna
49. During the period 1960 to 2000 wheat production increased from
- 35 million tones to 89.5 million tones
  - 11 million tones to 75 million tones
  - 25 million tones to 80 million tones
  - 20 million tones to 80 million tones
50. As a result of green revolution rice production went up from
- 11 million tones to 75 million tones
  - 35 million tones to 89.5 million tones
  - 11 million tones to 35 million tones
  - 75 million tones to 89.5 million tones
51. Sterile females who lack secondary sexual characters are victims of
- Turner's syndrome
  - Down's syndrome
  - Klinefelter's syndrome
  - All of these
52. Sickle cell anaemia results due to mutation caused by
- Substitution
  - Insertion
  - Deletion
  - Duplication
53. The principle of independent assortment of characters is proved by
- The appearance of tall and dwarf plants in  $F_2$  population
  - The appearance of tall and dwarf in the ratio 3: 1 and also the appearance of smooth and wrinkled seeded plant in the ratio 3: 1
  - The appearance of smooth and wrinkled seed plants in the  $F_2$  population
  - The observation that  $F_1$  progeny is tall
54. The RBC membrane of a person contains no antigens. His blood group will be
- A
  - B
  - AB
  - O
55. Chromosome theory of inheritance was given in
- 1900
  - 1901
  - 1902
  - 1903
56. Which of the following conditions represent a case of co-dominant genes?
- A gene expresses itself, suppressing the phenotypic effect of its alleles
  - Genes that are similar in phenotypic effect when present separately, but when together interact to produce a different trait
  - Allele, both of which interact to produce a trait. Which may resemble either of the parental type
  - Alleles, each of which produces an independent effect in heterozygous condition
57. Which among the following statements given below about sickle-cell anaemia are not true
- Out of the four possible genotypes only homozygous individuals for  $Hb^s$  ( $Hb^s Hb^s$ ) show the diseased phenotype
  - Heterozygous individuals appear apparently unaffected
  - The substitution of amino acid in the globin protein results due to the single base substitution at the sixth codon of the beta globin in gene from GUG to GAG
  - A only
  - A & B
  - A & C
  - C only
58. Which one of the following cannot be explained on the basis of Mendel's law of dominance?
- Factors occur in pairs
  - The discrete unit controlling a particular character is called a factor
  - Out of one pair of factors one is dominant, and the other recessive
  - Alleles do not show any blending and both the characters recover as such in  $F_2$  generation
59. Chromosomal theory of inheritance was given by
- De vries
  - Sutton
  - Boveri
  - Both b & C
60. Experimental verification of chromosomal theory of inheritance was by
- T.H. Morgan
  - Watson
  - Crick
  - Griffith