NEET Biology MCQ

Chapter-1. Reproduction in Organisms

1. In which of the following mammal estrous cycle is absent:
(a) cow (b) horse (c) monkey (d) rabbit

2. Identify the incorrect statement.
a. In asexual reproduction, the offspring produced are morphologically and genetically identical to the parent
b. Zoospores are sexual reproductive structures
c. In asexual reproduction, a single parent produces offspring with or without the formation of gametes
d. Conidia are asexual structures in Penicillium

3. Asexual reproductive structure of sponge:
(a) Gemmules (b)conidia (c)bulb (d)none of these

4. Which of the following is developed by parthenogenesis:
(a)Drones (b)queen honey bee (c)worker honey bee (d) both b and c

5. ----- is formed immediately after fertilization
(a) morula (b)blastula (c)zygote (d) foetus

6. The process which results the formation of zygote
(a) Isogamy (b) Anisogamy (c) Triple fusion (d) Syngamy

7. Which of the following is not an asexual reproductive structure?
(a) zoospores (b) pollen (c) buds (d) conidia

8. Parthenogenesis is the development of an organism directly from:
(a) Female gametes (b) Vegetative cells (c) Fertilized ovum (d)none of these

9. Which of the following organism reproduces by multiple fission?
(a) Euglena (b) Paramecium (c)Trypanosoma (d)Plasmodium

10. Which type of stem modification is seen in banana?
(a) stem tuber (b) bulb (c)corn (d) rhizome

11. Which animals have developed capacity of regeneration ?
(a) Hydra, Starfish (b) Plasmodium (c) Leech (d) Paramoecium

12. Sporulation occurs in.....
(a) Plasmodium (b) Hydra (c) Starfish (d) Spongilla

13. Which plant reproduces vegetatively by roots ?
(a) Oxalis (b) Bryophyllum (c) Onion (d) Dahlia

14. Which plant performs vegetative reproduction with the help of floral buds ?
(a) Agave (b) Bryophyllum (c) Ginger (d) Asparagus

15. Which part of the plant Bryophyllum performs vegetative reproduction ?
(a) Stem (b) Floral buds (c) Underground roots (d) Buds on leaf margin

16. Juvenile phase represents the period of-
a. Growth b. Death c. Birth d. None

17. Either male or female reproductive organs are found in the body
a. Monoecious b. Dioecious c. Meiocyte d. Syngamy

18. Propagules are used to raise--
a. growth b. new plants c. old plants d. all the above.

19. Find the monoecious plant
a. Coconut b. Cucurbits c. Both a and b d. Papaya

20. Identify the mis-match statement regarding post fertilization events from the following statements.
(a) Wall of ovary is converted into pericarp. (b) Outer integument is converted into inner endocarp
(c) Triploid nucleus develops as endosperm (d) Ovary is developed as fruit.

21. In these organisms, gametes are released in the surrounding medium
a. Fishes b. Amphibians c. Mammals d. Both a and b

22. Choose the correct statement from amongst the following:
a. Dioecious (hermaphrodite) organisms are seen only in animals
b. Dioecious organisms are seen only in plants
c. Dioecious organisms are seen in both plants and animals
d. Dioecious organisms are seen only in vertebrates

23.There is no natural death in single celled organisms like Amoeba and bacteria because:
a. They cannot reproduce sexually b. They reproduce by binary fission
c. They are not diploid d. They are microscopic
24. Amoeba reproduces by-
(a) Binary fission (b) Budding (c) Sporulation (d) Both a and c

25. What are ciliated spores ?
(a) Non-motile spores (b) Zoospores (c) Homospores (d) Heterospores

26. Non-flagellated spores are called conidia . In which organism they are seen ?
(a) Pencillium (b) Hydra (c) Amoeba (d) Chlamydomonas

27. Which animals reproduce by exogenous budding ?
(a) Hydra (b) Spongilla (c) Plasmodium (d) Amoeba

28. Some unicellular organisms shift to sexual method of reproduction , before the onset of adverse conditions, because-
a)Sexual reproduction is a simple method b)it involves gamets c) Survival chances are more in sexual reproduction due to variations d) None of these

29. During which process cyst is formed ?
(a) Binary fission (b) Multiple fission (c) Sporulation (d) Budding

30. In which method of reproduction, pseudopodiospores are formed ?
(a) Binary fission (b) Multiple fission (c) Sporulation (d) Budding

31. Antherozoids are the gamets formed in-
a) Algae b) Bryophytes c) Pteridophytes d) Both b and c

32. During which process cyst is formed ?
(a) Binary fission (b) Multiple fission (c) Sporulation (d) Budding

33. In which method pseudopodiospores are formed ?
(a) Binary fission (b) Multiple fission (c) Sporulation (d) Budding

34. In which organism multiple fission is seen ?
(a) Paramoecium (b) Plasmodium (c) Hydra (d) Planaria

35. Which of the following is not a natural method of vegetative reproduction ?
(a) Suckers (b) Cutting (c) Runners (d) Offsets

36. Which type of fission takes place in Euglena ?
(a) Transversal Binary fission (b) Longitudinal Binary fission (c) Peripheral Binary fission (d) Radial Binary fission

37. The plants which bears two types of heterospores during Sporophytic stage is known as……
(a) Aplanospores (b) Somatic spores (c) Homosporous (d) Heterosporous

38. Which of the following group of animals show regeneration ?
(a) Planaria, Hydra, Starfish (b) Starfish, Amoeba, Plasmodium
(c) Amoeba, Hydra, Paramoecium (d) Amoeba, Planaria, Starfish

39. A few statements 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 from the options given below:
(a) i and ii (b) ii and iii (c) ii and iv (d) i and iii.

40.The term 'clone' cannot be applied to offspring formed by sexual reproduction because:
a. Offspring do not possess exact copies of parental DNA
b. DNA of only one parent is copied and passed on to the offspring
c. Offspring are formed at different times
d. DNA of parent and offspring are completely different.

41. Which of the following is a post-fertilisation event in flowering plants?

a. Transfer of pollen grains b. Embryo development c. Formation of flower d. Formation of pollen grains

42. A few statements with regard to sexual reproduction are given below:
i. Sexual reproduction does not always require two individuals
ii. Sexual reproduction generally involves gametic fusion
iii. Meiosis never occurs during sexual reproduction
iv. External fertilisation is a rule during sexual reproduction
Choose the correct statements from the options below:
(a) i and iv (b) i and ii (c) ii and iii (d) i and iv

43. A multicellular, filamentous alga exhibits a type of sexual life cycle in which the meiotic division occurs after the formation of zygote. The adult filament of this alga has-
a. haploid vegetative cells and diploid gametangia b. diploid vegetative cells and diploid gametangia
c. diploid vegetative cells and haploid gametangia d. haploid vegetative cells and haploid gametangia.

44. The male gametes of rice plant have 12 chromosomes in their 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.

45. Given below are a few statements related to external fertilization. Choose the correct statements.
i. The male and female gametes are formed and released simultaneously
ii. Only a few gametes are released into the medium
iii. Water is the medium in a majority of organisms exhibiting external fertilization
iv. Offspring formed as a result of external fertilization have better chance of survival than those formed inside an organism
(a) iii and iv (b) i and iii (c) ii and iv (d) i and iv

46. The statements given below describe certain features that are observed in the pistil of flowers-
i. Pistil may have many carpels
ii. Each carpel may have more than one ovule
iii. Each carpel has only one ovule
iv. Pistil have only one carpel
Choose the statements that are true from the options below:
(a) i and ii (b) i and iii (c) ii and iv (d) iii and iv

47.Which of the following situations correctly describe the similarity between an angiosperm egg and a human egg?
i. Eggs of both are formed only once in a lifetime
ii. Both the angiosperm egg and human egg are stationary
iii. Both the angiosperm egg and human egg are motile
iv. Syngamy in both results in the formation of zygote
Choose the correct answer from the options given below:
a) ii and iv (b) iv only (c) iii and iv (d) i and iv

48. Appearance of vegetative propagules from the nodes of plants such as sugarcane and ginger is mainly because:

a. Nodes are shorter than internodes b. Nodes have meristematic cells c. Nodes are located near the soil d. Nodes have non-photosynthetic cells

49. Which of the following statements, support the view that elaborate sexual reproductive process appeared much later in the organic evolution.
i. Lower groups of organisms have simpler body design
ii. Asexual reproduction is common in lower groups
iii. Asexual reproduction is common in higher groups of organisms
iv. The high incidence of sexual reproduction in angiosperms and vertebrates
a) iii and iv (b) iv only (c) ii and iv (d) i and iv

50. Offspring formed by sexual reproduction exhibit more variation than those formed by Asexual reproduction because:
a. Sexual reproduction is a lengthy process
b. Gametes of parents have qualitatively different genetic composition
c. Genetic material comes from parents of two different species
d. Greater amount of DNA is involved in sexual reproduction.

****

ANSWER KEY

Q.No.	Ans	Q.No.	Ans	Q.No.	Ans	Q.No.	Ans	Q.No.	Ans
1	C	11	A	21	D	31	D	41	B
2	B	12	A	22	C	32	B	42	B
3	A	13	D	23	B	33	C	43	D
4	A	14	A	24	D	34	B	44	C
5	C	15	D	25	B	35	B	45	B
6	D	16	A	26	A	36	B	46	A
7	B	17	B	27	B	37	D	47	A
8	A	18	B	28	D	38	A	48	B
9	D	19	C	29	C	39	C	49	C
10	D	20	B	30	C	40	A	50	B

SEXUAL REPRODUCTION IN FLOWERING PLANTS-MCQ-NEET
CLASS-XII BIOLOGY

1) Formation of microspores from a Pollen Mother cell through meiosis is known as
a) Megasporogenasis, b)Pollination, c)Microsporogensis , d) Embryogenesis

2) The process of transfer of pollen grains from anther to stigma of another flower of the same plant is called
a)Xenogamy b)Geitonogamy c)Autogamy d)Syngamy

3) Removal of anthers from flower bud before the anther dehisces for plant breeding is known as
a)Emasculation ,b)Bagging, c) Artificial hybridization ,d) Rebagging

4) Inactive state of an embryo (seed)
a) Apomixis , b) Dormancy, c) Polyembryony ,d)Embryony

5) Most resistant organic material of exine
a) Funicle ,b) Scutellum, c) Germpore ,d) Sporopollenin

6) Flowers which do not open at all
a) Syncarp , b) Cleistogamous, c) Apocarpous ,d) Chasmogamous

7) Cotyledon of grass family situated towards one sided of embryonic axis
a) Scutellum, b)Antipodal , c) Epicotyl, d) Pericarp

8) Female gametophyte
a)Pollen grain , b)Ovule , c)Embryo sac ,d) Tapetum

9) Residual persistent nucleus
a) Pericarp , b)Germ pore, c) hilum ,d) Perisperm

10) Fusion of male and female gamete is called as
a) Double fertilization ,b)Triple fusion ,c) Syngamy
d)Artificial hybridization

11.The nutrition for developing pollen grains is obtained from-
a) Tapetium, b)Exine, c) Middle layer layer, d)none of these

12.In female reproductive structure ovule how many megaspores are functional.
a)one , b)two , c) three, d)All

13.Apple is an example of ---fruit
a) True fruit, b)False fruit, c)Parthenocarpic fruit, d)Apomictic fruits.

14.The resistant material present in the outer layer of pollen grains are made up of----
a.Cellulose, b. Pectine , c)Sporopollinin , d)Amylose.

15.Which seed has a viability of 10,000 yrs.
a) Lupinus arcticus b) Date palm c) Rice, d) Phoenix dactylifera

16. Microspore development occurs within…….
a) Microsporangium b) Endothecium c) Micropyle, d)Nucellus.

17. Name a flower pollinated by bird.
a) Agave, b) Grass c) Vallisneria, d.Red silk cotton

18. Pollen grains are well preserved as fossils because of……
a) Germ pores b) Sporopollenin c) cryopreservation, d. Pectin.

19. Yucca plant is pollinated by
a) Bird, b) Water c) Moth, d) Wind

20. Many insects may consume pollen without bringing out pollination such floral visitors are referred to as :
a) Pollen inhibitors, b) Pollen robbers, c) Pollinators, d) None of these.
b)

21.which of the following statement is not true
a. Tapetum helps in the dehiscence of anther
b. Exine of pollen grains are made of sporopollinin
c. Pollen grains of many species causes allergy
d. Pollen grains are stored in liquid nitrogen.

22.An example for a plant that provides safe places to lay eggs as floral rewards for pollination
a)Viola, b)Amorphophallus, c) Maize, d)Vallisneria.

23. Presence of more than one embryos in Seed without fertilization is
a)Somatic hybridization, b) Budding, c) Apomixis, d) Polyembrony

24. Which one of the following statement is not correct
a. The offsprings produced by asexual rep. are called clones.
b. Microscopic motile asexual reproductive structures are called zoospores
c. In potato, ginger and banana the new plantlets are arise from internodes of modified stem.
d. Water hyacinth that drain oxygen from water leads to the death of fishes

25. Which one of the following generate new genetic variation

a) Vegetative propagation ,b)Sexual reproduction, c)Parthenogenesis, d) Polyembryony.

26.In majority of Angiosperms
a)Egg has filiform apparatus, b) Egg has many antipodal cells c)Reduction division occurs in the megaspore cells, d)A small central cell is present in the Embryosac.

27.The ovule of an angiosperm is technically called.
a) Megasporangium, b)Megasporophyll, c)Megaspore mother cell , d)Megaspore.

28. Double fertilization is exhibited by
a)Algae, b)Fungi, c)Angiosperms, d)Gymnosperms.

29.Coconut fruit is a
a)Berry, b)Nut, c)Capsule, d)Drupe

30.Morphological nature of edible part of coconut is
a) Cotyledon, b)Endosperm,c) Perisperm, d)Pericarp.

31.A dioecious flowering plant prevents both
a) Autogamy and Geitenogamy, b)Geitenogamy and Xenogamy,
c)Cleistogamy and Xenogamy, d)Autogamy and xenogamy

32.Attraction and rewards are required for pollination in
a) Entomophilly, b) Hydrophilly, c) Anemophilly ,d)Cleistogamy.

33.Functional megaspore in an Angiosperm develops into
a)Endosperm, b) Embryo, c) Embryosac, d) Ovule

34.The coconut water from tender coconut represents
a)Endocarp , b)Free Nuclear endosperm,c) Free Nuclear embryo, d)Mesocarp.

35.The proximal end of filament of stamen is attached to
a)Anther, b)Placenta, c) Thalamus,d) Connective

36. Pollination in water hyacinth and water lily is carried out by
a)Water, b)Insects, c)Bats, d.) Air.
37.Name the plant that come to the surface of water to collect pollen grains
a) Vallisneria, b)Water lily, c)Lotus, d) Hydrilla

38.Corn cob tussles are made up of
a)Anther , b)Style and stigma, c)Stipules, d)None of these.

39.How many nucleus are present in the mature female gametophyte.
a)Four, b) Seven, c) One, d) Eight.

40.An economically important process in which seedless fruits are formed without fertilisation is by
a) Parthenocarpy, b) Apomixis, c) Emasculation,d) None of these.
b)

41.Pollen grains are stored in
a) Formaline, b)Water, c) Liquid nitrogen, d)Saline water.

42.The technique of preserving pollen grains is by
a) Cryopreservation, b) Hybridisation, c)Tissue culture, d)None of these.

43.Which among the following is not a False fruit.
a)Cashew, b) Srawberry, c)Banana, d) Apple.

44. A genetic mechanism to prevent self pollen from same flower or other flowers of same plant is by which of the following out breeding devices in plants
a) Anther and stigma placed different positions, b) Self incompatability,
c)Production of unisexual flowers, d) None of these.

45.An example for non albuminous seed is----
a)Wheat,b) Maize, c) Ground nut, d) Caster.

46.Production of seeds without fertilisation is called as
a) Parhenogeneis, b) Hybridsation, c)Emasulation, d) Apomixis.

47.The filiform apparatus that guide the entry of pollen tube into the ovule is present in
a) Antipoal cells, b) Synergids, c) Stigma, d)Polar nucei.

48.The removal of anthers from female flower in artificial hybridisation is called as
a) Bagging, b) Rebagging, c)Emasculation ,d)None of these.

49.Name the type of pollination in which genetically different types of pollen grains of the same species land on the stigma.
a)Xenogamy, b)Geitenogamy, c) Autogamy, d)Parthenocarpy.

50.Name the type of tissue present in the fertilised ovules of an Angiospermic plants that supplies food and nourishment to the developing embryo is
a) Tapetum, b) Endosperm, c) Sporogeous tissue, d)Synergids.

****

SEXUAL REPRODUCTION IN FLOWERING PLANTS-MCQ-NEET

ANSWER KEY -

1. c)Microsporogensis
2. b)Geitonogamy
3 . a)Emasculation
4 . b) Dormancy
5 . d) Sporopollenin
6 . b) Cleistogamous
7 .a) Scutellum
8 . c)Embryo sac
9 . d) Perisperm
10 .c) Syngamy
11. a) Tapetium
12. a)one
13. b)False fruit
14. c)Sporopollinin
15. a) Lupinus arcticus
16. a) Microsporangium
17. d.Red silk cotton
18. b) Sporopollenin
19. c) Moth
20. b) Pollen robbers
21. a. Tapetum helps in the dehiscence of anther
22 . b)Amorphophallus
23. d) Polyembrony
24. c. In potato, ginger and banana the new plantlets are arise from internodes of modified stem
25. b)Sexual reproduction
26. d)A small central cell is present in the Embryosac.
27. a) Megasporangium,
28. c)Angiosperms
29. b) Nut
30. b)Endosperm,
31. a) Autogamy and Geitenogamy
32. a) Entomophilly
33. c) Embryosac
34. b)Free Nuclear endosperm
35. c) Thalamus
36. b)Insects
37. a) Vallisneria
38. b)Style and stigma
39 .d) Eight.

40. b) Apomixis
41. c) Liquid nitrogen
42. a) Cryopreservation
43. c)Banana
44. b) Self incompatability
45. c) Ground nut
46. d) Apomixis
47. b) Synergids
48. c)Emasculation
49. a)Xenogamy
50 .b) Endosperm

SUB: BIOLOGY (CHAPTER:HUMAN REPRODUCTION)

STANDARD: XII

1.Which of the following produce sperms?
a)Seminal Vesicles b) Seminiferous tubules c) Epididymis d) Vas Efferentia

2.What is the other name for Leydig cells?
a) Sertoli cells b) Acinar cells c) Hepatic cells d) Interstitial cells

3.External opening of urethra is known as:
a) Ostia b) Osculum c) Urethral meatus d) None

4.The male reproductive accessory glands include:
a) Testis b) Seminal Vesicles c) Prostate & Bulbourethral glands d)B & C

5.Which of the following shows diploidity?
a) Spermatid b) Spermatozoa c) Spermatogonium d) Secondary spermatocyte

6.Which of the following is a male sex accessory duct?
a) Rete testis b) Vasa efferentia c) Epididymis & vas deferens d) All

7. Male gametes in humans provide nutrition by:
a) Sertoli cells b) Bulbourethral cells c) Leydig cells d) Lobules

8. What is the function of scrotum?
a) To maintain low temperature b) To maintain high temperature
c) Heterothermal d) None

9. What is the composition of seminal plasma?
a) Rich in fructose b) Rich in calcium c) Contains enzymes d) All

10. What is the other name for fallopian tube?
a) Ampulla b) Fimbriae c) Oviduct d) All

11. Connective tissue that attach the ovaries with uterine wall and pelvic wall is:
a) Ligament b) Tendon c) Areolar d) Adipose

12. Which of the following exhibits strong contraction during delivery of the baby?
a) Perimetrium b) Endometrium c) Myometrium d) None

13. Hymen is associated with:
a) Male genital system b) Female genital system c) Both A & B d) None

14. Which of the following is associated with female genital system?
a) Epididymis b) Clitoris c) Vas efferens d) Seminal vesicle

15. Sucking of milk out takes place through:
a) Mammary tubules b) Mammary duct c) Mammary ampullae d) Lactiferous duct

16. Identify gonadal mother cells from the following:
a) Spermatogonia b) Oogonia c) Ootid & Spermatid d) A & B

17. Spermiation is the process of releasing of:
a) Spermatids b) Primary spermatocytes c) Sperms d) All

18. Gonadotropic releasing hormone is secreted from:
Hypothalamus b) Hypophysis c) Neurohypophysis d) Pars intermedia

19. Hormone that stimulates the leydig cells is:
Luteinizing hormone b) FSH c) GnRH d) A & B

20. Mitochondria in a sperm are located in:
Head b) Acrosome c) Middle piece d) Tail

21. Fluid filled cavity 'Antrum' is found in:
Oogonia b) Primary follicle c) Tertiary follicle d) Secondary follicle

22. Graffian follicle is formed from:
Primary follicle b) Secondary follicle c) Tertiary follicle d) None

23. Polarbodies are formed during:
Spermatogenesis b) Oogenesis c) Embryogenesis d) All

24. What is common in both sperms and ovum?
Haploidity b) Diploidity c) Polyploidity d) Presence of acrosome

25. First meiotic division during oogenesis takes place:
After ovulation b) Prior to ovulation c) During embryogenesis d) None

26. Appearance of first menstruation at puberty is called:
Menopause b) Menarche c) Fertility d) Sterility

27. Luteal phase during a menstrual cycle is also known as:
Proliferative phase b) Secretory phase c) Reductive phase d) Regenerative phase

28. Function of corpus luteum is to secrete:
Progesterone b) Estrogen c) Testosterone d) All

29. Cessation of menstrual cycle is termed as:
Menarche b) Menopause c) Sterility d) Abortion

30. Whether human females are:
Homogametic b) Heterogametic c) Agametic d) Monogametic

31. The cells of morula are known as:
Blastocysts b) Oviblasts c) Oviclasts d) Blastomeres

32. Corona radiate lies:
a) External to the zona pellucida b) Internal to the zona pellucida
c) Along with periviteline space d) A & C

33. Which part of the blastocyst attaches with the surface of endometrium?
a) Inner cell mass b) Trophoblast c) Ectoderm d) Mesoderm

34. The nature of post zygotic divisions is of:
a) Amitotic b) Mitotic c) Meiotic d) Iregular

35. Chorionc villi appear on:
a) Endometrium b) Trophoblast c) Myometrium d) Perimetrium

36. Which of the following is a placental homone?
a) Human chorionic gonadotropin b) Relaxin c) Oxytocin d) None

37. Stem cells are the part of:
a) Inner cell mass b) Ectoderm c) Endoderm d) Mesoderm

38. First trimester period is:
a) 12 weeks b) 24 weeks c) 36 weeks d) 4 weeks

39. The first appearance of limbs and external genitalia take place during:
a) 1^{st} trimester b) 2^{nd} trimester c) 3d trimester d) None

40. Delivery of the fetus after 9 months is known as:
a) Gestation b) Gastrulation c) Parturition d) Implantation

41. Colostrum is rich in:
a) Antigens b) Antibodies c) Interferons d) All

42. What is the function of oxytocin is:
a) Contraction of uterine muscles b) To lower the blood pressure
c) To secrete milk d) To expand the ligament

43. Milk in mammary glands is secreted by:
a) Acinar cells b) Hepatic cells c) Chondrocytes d) Cells of alveoli

44. A crosome is a part of:
a) Chromosome b) Ribosome c) Oxysome d) Spermatozoan

45. What would be the fate of menstruation if the ovum is not fertilized?
a) Occurs for 3-5 days b) Does not occur c) Occurs for 5-10 days d) Occurs irregularly

46. Umbilical lies between:
a) Embryo and placenta b) Perimetrium and ovary c) Ovary and fallopian tube
d) Placenta and ovary

47. Relaxin is secreted by:
a) Endometrium b) Ovary c) Pituitary gland d) Hypothalamus

48. Uterus is commonly called as:
a) Body cavity b) Womb c) Stomach d) Bladder

49. Number of testicular lobules found in each testis is:
a) 50 b) 100 c) 150 d) 250

50. Number of mammary lobes in each mammary gland is:
a) 15-20 b) 50-100 c) 100-150 d) 200

Answer key

1. A
2. D
3. C
4. D
5. C
6. D
7. A
8. A
9. D
10. C
11. A
12. D
13. B
14. B
15. C
16. D
17. C
18. A
19. A
20. C
21. C
22. C
23. B
24. A
25. A
26. B
27. B
28. A
29. B
30. A
31. B
32. A
33. B
34. B
35. B
36. A
37. A
38. A
39. A
40. C
41. B
42. A
43. D
44. D
45. A
46. A
47. B
48. B
49. D
50. A

MULTIPLE CHOICE QUESTIONS
PRINCIPLES OF INHERITANCE AND VARIATON

1. Individuals having dissimilar traits (alleles) on homologous chromosomes are called
a)Heterozygous
b) Homozygous
c) Dominant
d)Recessive

2. An allele is considered dominant
a) When it express in homozygosity
b) When it express even in the presence of alternate allele
c) When it express desirable phenotype
d) Both (b) and (c)

3. Mendel's dihybrid ratio is
a) 1:1:1:1
b) 3:1
c) 9:3:3:1
d) 9:1:1:5

4. Mendel studied seven contrasting characters for his breeding experiment with Pisum sativum, which of the following characters did he not use?
a) Pod shape
b) Leaf shape
c) Plant height
d) Pod color

5. An organism with two identical allele of a gene in a cell is called
a) Heterozygous
b) Homozygous
c) Hybrid
d) Homozygous

6. Which principle of inheritance was not given by Mendel
a)Independent assortment
b)Dominance
c) Purity of gametes
d)Linkage

7. When dominant BB and recessive bb is crossed, the percentage of progeny showing the parental genotype is
a)0%
b) 25%
c) 50%
d)75%

8. The year 1900AD is highly significant for genetics due to
a)Chromosome theory of heredity
b) Discovery of genes
c) Rediscovery of Mendelism
d)Principle of linkage

9. The process by which the segregation of Mendelian factors takes place is
a)Hybridisation
b)Mitosis
c)Meiosis
d) Fertilisation

10. Which would most probably be the genetic makeup of the parents of a colour blind daughter?
a)Carrier mother and normal father
b) Carrier mother and color blind father
c) Color blind mother and normal father
d)Normal mother and normal father

11. If a heterozygous tall plant is crossed with a homozygous dwarf plant the proportion of dwarf progeny will be
a)25%
b)50%
c)75%
d)100%

12. When two tall plants are crossed 45 tall plants and 14 dwarf plants are obtained.The genotype of parent plants is
a)TT x TT
b)TT x tt
c)Tt x Tt
d)TT x Tt

13.Which of the following is not a dominant character selected by Mendel in Pisum?
a) Yellow pod color
b) Violet flower colour
c) Axillary flowers
d) Yellow seed colour

14. Variation can occur due to
a) Mutations
b) Recombination
c) Fertilisation
d) All of these

15. Who discovered the phenomenon of incomplete dominance in Mirabilis and Antirrhinum?
a) De Vries
b) Bateson
c) Carl Correns

d) Davenport

16. How many types of gametes are produced by a trihybrid?
a) 3
b) 4
c) 8
d) 16

17. A dihybrid heterozygous tall plant with round seed is crossed with a similar genotype, what percentage of plants should posses Tt Rr genotype?
a) 6.25%
b) 12.5%
c) 25%
d) 75%

18. A cross by changing the source of ovum is
a) Back cross
b) Test cross
c) Monohybrid
d) Reciprocal cross

19. When the phenotypic and genotypic ratios resemble in the F2 generation it is an example of
a) Independent assortment
b) Qualitative inheritance
c) Segregation
d) Incomplete dominance

20. In what situation, the phenotype of a dihybrid cross would exhibit parental combination of characters in more than the expected value and recombination in less than the expected value?
a) When genes are in mitochondria
b) When duplicate genes are present
c) When genes are linked
d) When supplementary genes are present

21. When the dihybrid Tt rr plants are self-fertilized, what percentage of descendants would be heterozygous for one character and homozygous for another?
a) 25%
b) 50%
c) 75%
d) 100%

22. In a double heterozygous plant, (Eg: Aa Bb) four types of gametes are produced .This illustrate the law of
a) Dominance
b) Segregation
c) Purity of gametes
d) Independent assortment

23. Back cross with recessive parent is called
a) Monohybrid cross
b) Multiple cross
c) Single cross
d) Test cross

24. If a gene has multiple effects, it is called
a) Multiple allelism
b) Pleiotropism
c) Polygeny
d) Epistasis

25. Maize has 10 pairs of chromosomes. How many linkage groups should it possess
a) 5
b) 10
c) 20
d)40

26. Linked genes may be separated by
a) Gene mutation
b) Polyploidy
c) Segregation
d)Crossing over

27. Crossing over in diploid organism is responsible for
a) Recombination of linked gene
b) Segregation of alleles
c) Dominance of genes
d) Linkage between genes

28. Crossing over takes place between
a) Sister chromatids of homologous chromosomes
b) Non sister chromatids of homologous chromosomes
c) Sisters of non-homologous chromosomes
d) DNA and RNA

29. If the distance between genes on a chromosome is more , the linkage strength is
a) More
b) Less
c) Unaffected
d) More in somatic cells

30. Drosophila melanogaster has
a) 2 pairs of autosomes and 1 pair of sex chromosomes
b) 3 pairs of autosomes and 1 pair of sex chromosomes
c) 1 pair of autosomes and 3 pairs of sex chromosomes
d) 2 pairs of autosomes and 2 pairs of sex chromosomes

31. A trisomic individual has a chromosomal number of
a) 2n -1
b) 2n +2
c) 2n + 1
d) 2n + 3

32. Among the following which one is the best chemical for inducing the polyploidy?
a) Ethylene
b) Colchicine
c) Acridines
d) Mustard gas

33. Down's syndrome is an example of
a) Monosomy
b) Trisomy
c) Triploidy
d) Eupolyploidy

34. Which of the following is 6x (hexaploid) wheat?
a) Triticum durum
b) T. monococcum
c) T.aestivum
d) Triticale

35. The holandric genes are located on
a) Mitochondria
b) X- chromosome
c) Y-chromosome
d) Polytene chromosome

36. If the haploid number of chromosomes in a plant is 12,then the number of chromosomes in monosomic is
a) 22
b) 23
c) 25
d) 26

37. Alleles are paired in
a) In zygote
b) In diploid organism
c) Dihybrid
d) All of these

38. Inheritance of flower colour is an example of incomplete dominance, which is seen in:
a) Antirrhinum
b) Pisum
c) Solanum
d) Hibiscus

39. Haemophilia most likely originated as a result of
a) The separation of two homologous chromosomes
b) A non disjunction of chromosome number 21
c) The crossing over to two sex chromosomes
d) A gene mutation in the X- chromosome

40. Chromosome complement with 2n-1 is called as
a) Monosomy
b) Trisomy
c) Nullisomy
d) Tetrasomy

41. The most striking example of point mutation is found in a disease called
a) Night blindness
b) Turners syndrome
c) Down's syndrome
d) Sickle cell anemia

42. In which of the following, females are heterogametic
A) Humans
b) Grasshopper
c) Drosophila
d) Fowl

43. Gynaecomastia is a common feature seen in:
a) Down's syndrome
b) Turner's syndrome
c) Cystic fibrosis
d) Klinefelter's syndrome

44. XO type of sex determination is seen in:
a) Man
b) Grasshopper
c) Drosophila
d) Birds

45. Which of the following is not a Mendelian disorder?
a) Haemophilia
b) Cystic fibrosis
c) Thalesemia
d) Turner's syndrome

46. How many type of phenotypes possible for ABO blood group
a) 2
b) 3
c) 4
d) 1

47. A person affected with phenylketonuria , lacks an enzyme that converts the amino acid phenylalanine into
a) Valine
b) Proline
c) Histidine
d) Tyrosine

48. Haemophilia in man is due to
a) Sex-linked inheritance
b) Sex-limited inheritance
c) Sex-influenced inheritance
d) Primary non-disjunction

49. In XO type of sex determination
a) Females produce two different types of gametes
b) Males produce two different types of gametes
c) Females produce gametes with Y chromosome
d) Males produce single type of gametes

50. Which one of the following cannot be explained on the basis of Mendel's Law of Dominance?
a) Factors occur in pairs
b) The discrete unit controlling a particular character is called a factor
c) Out of one pair of factors one is dominant , and the other recessive
d) Alleles do not show any blending and both the characters recover as such in F2 generation

51. The genotype of a plant showing the dominant phenotype can be determined by :
a) Back cross
b) Test cross
c) Dihybrid cross
d) Pedigree analysis

52. Which one of the following conditions correctly describes the manner of determining the sex in the given example?
a) XO condition in humans as found in Turner syndrome , determines female sex
b) Homozygous sex chromosomes (XX) produce male in Drosophila
c) Homozygous sex chromosomes (ZZ) determine female sex in birds
d) XO type of sex chromosomes determine male sex in grasshopper

53. F2 generation in a Mendelian cross showed that both genotypic and phenotypic ratios are same as 1:2:1. It represents a case of
a) Monohybrid cross with complete dominanace
b) Monohybrid cross with incomplete dominance
c) Co-dominance
d) Dihybrid cross

54. Alleles which can express only in pair with similar allele is
a) Dominant
b) Recessive

c) Co dominant
d) Lethal

55. Among the following traits that Mendel studied , choose the recessive one
a) Yellow pods
b) Axile flower
c) Terminal flower
d) Green seed

56.When a dominant ‘AA’ and a recessive ‘aa’ are crossed percentage of the progenies showing the parental genotypes will be
a) 0%
b)25%
c)50%
d) 100%

57. A normal visioned man whose father was colour blind ,marries a women whose father is also colour blind . They have their first child as a daughter . What are the chances that this child would be colour blind?
a) 25%
b) 50%
c)100%
d)0%

58. The incorrect statement with regard to Haemophilia is
a)It is sex linked disease
b) It is a recessive disease
c) It is a dominant disease
d) A single protein involved in the clotting of blood is affected

59. Person with blood group AB is considered as universal recipient because he has
a) Both A and B antibodies in the plasma
b) No antigen on RBC and no antibody in the plasma
c) Both A and B antigens in the plasma but no antibodies in the plasma
d) Both A and B antigens on RBC but no antibodies in the plasma

60. A patient with unknown blood group needs immediate blood transfusion. The group that can be donated will be
a) Blood group O
b) Blood group AB
c) Blood group A
d) Blood group B

61. Which Mendelian idea is depicted by a cross in which the F1 generation resembles both parents
a) Incomplete dominance
b) Inheritance of 1 gene
c) Co-dominance
d) Multiple allelism

62. An F2 hybrid generation will have
a) 4 types of genotypes
b) 7 types of genotypes
c) 9 types of genotypes
d) 16 types of genotypes

63. Who among the following is not concerned with re-discovery of Mendelism
a) Von Tschermak
b) Carl Correns
c) Theodre Bovery
d) Hugode Vries

64. The diploid number of drosophila melanogaster
a) 4
b) 8
c) 16
d) 12

65. Linkage phenomenon explained first by
a) William Batson
b) T.H.Morgan
c) Alfsed Sturtevent
d) Johanson

66. Who put forward the crossing theory of recombination
a) Gregor Mendel
b) Wiliam Bateson
c) Janssen
d) T.H.Morgan

67. In honeybees
a) The males have only one set of chromosomes
b) The males have single sex chromosomes
c) Males produce projeny by parthenogenesis
d) Both (a) and (c)

68. First child of a normal couple is phenylketouric. The probability of second male child is affected will be
a) 0%
b) 25%
c) 50%
d) 100%

69. Mutation of any single gene maybe
a) Micromutation
b) Point mutation
c) Gene mutation
d) All of these

70. A normal man whose father was haemophilic marries a women whose father was haemophilic. They have their first child as daughter. What is the chance that this could be
a) 25%
b) 50%
c) 0%
d) 100%

71. Thallasemia beta is located on
a) 11th chromosome
b) 16th chromosome
c)9th chromosome
d) 12th chromosome

72. Choose the sex influenced trait
a) Ovary in female
b) Hypertrichosis
c) Haemophilia
d) Pattern baldness

73. Clotting factors VIII is absent in
a) Haemophilia A
b) Haemophiia B
c) Thalassamia beta
d) Both (a) and (b)

74. Pedigree analysis is useful for
a) Study of inheritance when arranged mating is not possible
b) Study of sex linked inheritance in man
c) Study of Mendelian disorders in man
d) All of these

75. Choose the incorrect statement regarding haemophilia
a) It is x –linked
b) It is dominant in male
c) it inherit from father to daughter
d) A single protein in cascade of several protiens involved in clotting is affected

76. Choose the wrong statement
a) Mental retardation can be the effect of phenyl pyruvic acid
b) Thallasemia is a quantitative problem
c) Sickle cell anemia person produce abnormal Hb
d) Cystic fibrosis is quantitative

77. Which of the following cannot be detected in developing foetus by amniocentesis /
a) Klinefelter syndrome
b) Sex of the foetus
c) Down syndrome
d) Jaundice

78. Which mendelian idea is depicted by a cross in which the F1 generation resembles both the parents?
a) Incomplete dominance
b) Law of dominance
c) Inheritance of one gene
d) Co- dominance

79. If both parents are carriers of thalassemia , which is an autosomal recessive disorder , what are the chance of pregnancy resulting in an affected child?
a) No chance
b) 50%
c) 25%
d)100%

80. A human female with Turner's syndrome
a) Has one additional X chromosome
b) Exhibits male characters
c) Is able to produce children with normal husband
d) Has 45 chromosomes with XO

81. Which of the following cannot be expected on the basis of Mendel's law of dominance
a) It explains the expression of one of the parental traits in F 1
b) It explain expression of both traits in F 2
c) It explains the 3:1 ratio in F 2
d) It explains the formation of functional enzyme by dominant allele

82. When heterozygous yellow round seed plants and self-fertilized, the frequency of occurrence of RrYY genotype among the offspring's is
a) 1/16
b) 3/16
c) 2/16
d) 4/16

83. A person homozygous for autosomal loci 'a' and 'b' and heterozygous for gene 'p' shall produce how many types of gametes in respect of these loci
a) 1 type
b) 2 types
c) 3 types
d) 4 types

84. Experimental proof for chromosome theory of inheritance is given by
a) Sutton
b) Sutton and Bovery
c) T H Morgan
d) Sturtevent

85. The nuclear structure observed by Henking in 50% of the sperms in the testes of a insect was termed
a) X-body

b) Bar body
c) Polar body
d) Chromatin

86. First artificial mutation was induced in
a) Barley
b) Maize
c) Drosophila
d) Neurospora

87. Hemophilic person marries a girl having no history of the disease in her pedigree. What is the chance that a haemophilic child is born to them
a) 0%
b) 25%
c) 50%
d) 75%

ANSWER KEY

Q	A	Q	A	Q	A	Q	A
1	C	2	B	3	D	4	C
5	B	6	B	7	B	8	A
9	C	10	A	11	B	12	C
13	C	14	C	15	D	16	B
17	C	18	D	19	B	20	A
21	D	22	D	23	D	24	B
25	B	26	C	27	B	28	B
29	B	30	D	31	B	32	A
33	B	34	C	35	B	36	B
37	C	38	C	39	D	40	D
41	D	42	A	43	D	44	A
45	D	46	D	47	A	48	D
49	B	50	B	51	D	52	B
53	B	54	D	55	B	56	D
57	B	58	D	59	D	60	C
61	C	62	D	63	D	64	B
65	A	66	A	67	D	68	A
69	C	70	C	71	A	72	C
73	C	74	A	75	C	76	C
77	C	78	C	79	B	80	B
81	B	82	A	83	B	84	D
85	C	86	C	87	A		

NEET MODEL QUESTIONS
CHAPTER 4 – REPRODUCTIVE HEALTH

1. In the women fertility ceases at about 45 to 55 years.This arrest of reproductive capacity is known as
A)Gestation B) Menopause C) Menstruation D)Puberty

2. The correct sequence of reproductive events in humans are:
A)gametogenesis,implantation,fertilization,insemination,gestation,parturition.
B)gametogenesis,insemination,fertilisation,implantation,gestation,parturition.
C)gametogenesis,insemination,implantation,fertilization,gestation,parturition.
D)gametogenesis,fertilization,insemination,implantation,gestation,parturition.

3. The tubuli recti of seminiferous tubules in each testes open into a network called
A)vasa efferentia B)vas deferens C)rete testis D)ductus epididymis

4. Lippes loop is a
A)traditional contraceptive method B)surgical contraceptive C)contraceptive method for male D)non-medicated IUDs

5. The contraceptive method in which the couples avoid or abstain from coitus day 10/17 of menstrual cycle is called
A)lactational amenorrhoea B)coitus interruptus c)periodic abstinence D)withdrawal method

6. Releasing of seminal fluid into the female genital tract is called
A)ejaculation B)implantation C)copulation D)insemination

7. Sterilisation procedure in the male is called
A)vasectomy B)tubectomy C)salpingectomy D)hysterectomy

8. In vasectomy which part is removed or tied up
A) fallopian tube B)vas deferens C)vas efferentia D)ejaculatory duct

9. Amniocentesis is a prenatal technique used to
A) correct the genetic features of the foetus
B)reverse the sex of the foetus
C)estimate the essential aminoacids in the body
D)detect chromosomal abnormalities in the child.

10. Which of the following is a hormone releasing IUDs
A)lipper loop B)multiload 375 C)LNG 7 D)LNG 20

11. Find out the correct statement about IUDs
i) IUDs increases phagocytosis of sperms.
ii) Cu ions suppress sperm motility and fertilizing capacity of sperms.
iii) Hormone releasing IUDs make the uterus unsuitable for implantation.
iv) Progestasert is a hormone releasing IUDs
A) only 1 & 2 is correct B) only 3 & 4 is correct C) 2 & 3 are false D) all are correct

12. Expand MTP

A) Mechanical Transfer of Pollen B) Medical Termination Parturition

C) Medical Termination of Pregnancy D) Maternally Transmitted Pathogen

13. The function of Cu T is to prevent

A) Ovulation B) Maturation of ovum C) Fertilization D) Implantation

14. Test tube baby means a baby born when

A) It is developed in a test tube.

B) It is developed through tissue culture method.

C) The ovum is fertilized externally and thereafter implanted in uterus.

D) It develops from a non-fertilized egg.

15. Contraceptive pills does not

A) Inhibit ovulation B) Alter the quality of cervical mucus.

C) Engulf the sperm D) Prevents the entry of sperm.

16. A contraceptive pill contains

A) Progesterone & estrogen B) Spermicidal salts C) Chemicals that cause automatic abortion

D)Chemicals that prevent fertilization.

17. CDRI is located at

A)Mumbai B) Bangalore C) Lucknow D) Delhi

18. Termination is safe if done within

A) 2nd trimester of pregnancy B) 12 weeks of pregnancy

C) 4 months D) All

19. Transfer of ovum collected from a donor into the fallopian tube of another female is known as

A) ZIFT B) IUT C) IVF D) GIFT

20. Sperm directly injected into the ovum is

A)IUI B)GIFT C)ICSI D)IUT

21. Which of the following is a birth control method

A) GIFT B) ET C)ICSI D) IUCD

22. The presence of which of the following in the urine is tested for pregnancy diagnosis

A) GnRH B) Oxytocin C) HCG D) Prolactin

23. According to WHO reproductive health means total well-being of the following aspects of

A) Physical B) Emotional C) Behavioural D) All

24. The family planning programmes were initiated in the year

A 1951 B) 1956 C) 1961 D) 1966

25. Introduction of sex education in schools was to

A) prevent child marriages B) to be friendly invariable of sex
C) to prevent misconceptions about sex related aspects
D) to keep them healthy

ANSWER KEY

1	B
2	B
3	C
4	D
5	C
6	D
7	A
8	B
9	D
10	D
11	D
12	C
13	C
14	C
15	C
16	A
17	C
18	B
19	D
20	C
21	D
22	C
23	D
24	A
25	C

NEET Biology MCQ

Chapter-6 Molecular basis of Inheritance

1. A sample of DNA contains 20% of adenine. What is the quantity of guanine present?
   A. 30 B. 20 C. 15 D. 25

2. Who proposed the concept of reverse transcription?
   A. Crick &Temmin B. Temmin& Baltimore C. Watson & Chargaff D. Chargaff

3. What is the name of process of addition of methyl guanosine triphosphate at the 5' end of hn RNA?
   A. Splicing B. Capping C. Tailing D. None of these

4. Find out the wrong pair/s?
   1. rRNA- RNA polymerase I
   2. tRNA- RNA polymerase II
   3. mRNA-RNA polymerase III

   A. Both 1 & 2 B. Both 2& 3 C. Only 1 D. Only 2

5. Who proposed base pairing rules of DNA?
   A. James Watson B. Erwin Chargaff C. Francis Crick D. Frederic Griffith

6. Find out the incorrect pair
   1. β- galactosidase – produces by z-gene
   2. Permease – produces by y-gene
   3. Transacetylase – produces by a-gene

   A. 1 & 2 B. 2&3 C. All the statements D. None of the statements

7. What is the length of DNA having 75 base pairs?
   A. $255A^0$ B. $112.5\ A^0$ C. $750\ A^0$ D. None of these

8. Which amino acids are present mostly in histone?
   A. Arginine & Glycine B. Glycine & Lysine C. Arginine & Lysine D. Arginine &Valine

9. During tailing which molecule is added at the 3' and of hnRNA?
   A. Poly adenylate residue B. Methyl guanosine tri phosphate C. Methyl guanosine di phosphate D. Adenosine monophosphate

10. Which type of histones interconnect two adjacent nucleosomes?
    A. H_1& H_2A B. H_2A & H_2B C. H_1 only D. H_3 &H_2A

11. Who discovered Lac operon?
    A. Jacob & Monod B. Jacob & Watson C. Watson & Monod D. Crick & Monod

12. Which is the largest gene in Man?
    A. Dystrophin B. Dystronin C. Dystromin D. Dystropin

13. What were the experimental materials used by Griffith to prove that DNA is the genetic material?
    A. E-coli & Streptococcus pneumonia B. Mice & Staphylococcus pneumonia C. Mice, Streptococcus pneumonia & Staphylococcus pneumonia D. None of these

14. Which enzyme unwinds DNA double helix during DNA replication?
    A. Topoisomerase B. Helicase C. SSB protein D. DNA polymerase

15. Who experimentally proved that DNA is the genetic material?
    A. Meselson& Chase B. Hershey & Chase C. Hershey &Meselson D. Watson & Chase

16. Consider the following statements
    1. Codes for amino acid methionine
    2. Initiation codon
    3. Stop codon
    4. Sense codon

    Which of the above statements are true with respect to AUG?

    A. 1, 2 & 3 are correct B. 2, 3 & 4 are correct C. 1, 2 & 4 are correct D. Only 1 is correct

17. Which codons are stop codons
    A. UAA,UGC & UCG B. UAA,UGA& UAG

    C. UAA,UGC & UGA D. UAA,UAG & UCG

18. Which amino acids are coded by the genetic codes GAG & GUG respectively
    A. Glutamic acid & Glutamic acid B. Glutaric acid &Valine C. Glutaric acid &ProlineD. Glutamic acid &Valine

19. The exchange of chromosomes segments between non-homologous chromosomes is called

A. Translocation B. Deletion C. Transfer D. Frame shift

20. Okazaki fragments are
A. Short DNA fragments on the lagging strand
B. Short DNA fragments on the leading strand
C. The RNA primers required for initiation of DNA synthesis
D. The DNA fragment produced due to radiation action

21. RNA polymerizes which is on the promoter, moves to the structural genes to transcribe them. However, it happens when
A. There is no repressor on the operator
B. There is repressor on the operator
C. Inducer binds to structural genes
D. RNA polymerase shifts first to regulator gene

22. The special unwinding enzyme that helps in breaking the weak hydrogen bond which hold the two strands of DNA is
A. Primase B. DNA ligase C.DNA polymerase D. Helicase

23. Transfer of DNA from one bacteria to another through cell to cell contact is known as
A.Conjugation B.Transformation C.Transduction D.Transcription

24. The four nitrogen base sequence which form the code words for DNA Language is
A. UTAC B. ACTU C. AGCU D. ATCG

25. DNA strands are antiparallel because of the presence of
A. H-bonds B. Peptide bonds C. Di sulphide bonds D.Phospho diester bonds

26. Transformation experiments using pneumococcus bacteria led to the hypothesis that
A. RNA is the transfer link between DNA and protein synthesis
B.Chromosomes are made up of DNA
C.DNA is genetic substance
D.Bacteria has sexual reproduction

27. The type of RNA specifically responsible for directing the proper sequence of amino acids in protein synthesis is
A. Ribosomal RNA B.Messenger RNA C.Chromosomal RNA d) None

28. The base sequence of the strand of DNA is CATTAG CATGAT GAC. What will be the sequence of RNA strand which is complimentary with the DNA?
A. GTA ATC GAT CTA B. UA AUC GUA GUA CUG
C. GTA ATG ATG GUA CUG D. None of these

29. Which of the following is correct according to Chargaff's rules?

A. A+C=G+T B. A+T=G+C C. A+T=T+C d) All the above

30. Who discovered DNA polymerase?

A. Kornberg B. Chargaff C. Nathans D. Smith

31. Which of the viruses exhibits reverse transcription process?

A. Polio virus B. Tobacco mosaic virus C. Retro virus D. Hepatitis B virus

32. Where is the location of promoter in the transcription unit?

A. Towards 5' end of template strand
B. Towards 3' end of template strand
C. Towards 5' end of coding strand
D. Towards 3' end of coding strand

33. Which molecule acts as an adaptor during translation?

A. mRNA B. rRNA C.tRNA D.hnRNA

34. Who confirmed transforming principle experimentally?

A. Oswald Avery B. Collin McLeod C. Maclynn McCarty D. All of them together

35. What is the product of metabolism of galactose in lac operon?

A. Glucose + Lactose B. Glucose + Glucose C. Glucose + Fructose D. None

36. What is the name of segment of DNA capable of producing a polypeptide chain

A. Recon B. Cistron C. Muton D. None of these

37. Who experimentally proved semi conservative model of DNA replication

A. Meselson & Stahl B. Frederic Griffith C. Watson & Crick D. Chargaff

38. The codon AUG stands for which amino acid

A. Tryptophan B. Glycine C. Lysine D. Methionine

39. How many sense codons are there in genetic code

A. 64 B. 61 C. 62 D. 60

40. When did human genome project start?

A. 1989 B. 1990 C. 1988 D. None

41. Where is the location of terminator in the transcription unit

E. Towards 5' end of template strand

F. Towards 3’ end of template strand
G. Towards 5’ end of coding strand
H. Towards 3’ end of coding strand

42. Who named the term nucleic acid to the content of chromatin?
A. Frederic Altmann B. Oswald Awery C. Gregor Mendel D. None

43. Which enzymes prevents the binding of unwound DNA strands
A. DNA ligase B. DNA polymerase C. SSB protein D. Helicase

44. RNA polymerase III transcribes
A. tRNA B. mRNA C. hnRNA D. rRNA

45. Degeneracy of genetic code is due to
A. First nitrogen base
B. Second nitrogen base
C. Third nitrogen base
D. First & second nitrogen base

46. Number of base pairs in a mini satellite is approximately
A. 6-12 bp B. 12-18 bp C. 18- 24 bp D. None

47. The post transcriptional process involves
A. Splicing B. Tailing C. Capping D. All

48. How many naturally occurring amino acids are there
A. 20 B. 21 C.22 D. None

49. How many stop codons are there?
A. 3 B.2 C. 4 D. 5

50. Which gene produces permease in Lac operon?
A. Z-gene B. A- gene C. Y-gene D. P-gene

****

ANSWERS KEYS

1. B
2. B
3. B
4. B
5. B
6. D
7. B
8. C
9. A
10. C
11. A
12. A
13. C
14. B
15. B
16. C
17. B
18. D
19. A
20. A
21. A
22. D
23. B
24. D
25. D
26. B
27. B
28. D
29. B
30. A
31. A
32. A
33. C
34. D
35. D
36. B
37. A
38. D
39. B
40. B
41. B
42. D
43. C
44. A
45. C
46. D
47. D
48. A
49. A
50. C

NEET Biology MCQ
CHAPTER-7 EVOLUTION

1 Alternative forms of a gene are called _____.

a) loci b) multiples c) Chromosomes d) Alleles

2 Heredity or inheritance of specific traits became clearer due to

a) Lamarck's theory b) Mendel worked on garden peas

c) Darwinism d) Neo-Darwinism

3 Which of the following sentences is true about the evolutionary process?

a) There is no real 'progress' in the idea of evolution.
b) humans are unique, a totally new type of organism.
c) progress is nature's religion.
d) Evolution of life forms was rapid in the beginning ages.

4 Microevolution takes place due to

a) somatogenic variation
b) blastogenic variation
c) continuous variation
d) Successive variation

5 The difference between Homo sapiens and the Homo erectus was ____. .

a) Homo sapiens originated in Africa while Homo erectus was in Asia
b) Homo erectus were much smaller in size than homo sapiens.
c) Homo erectus stayed in Africa while Homo sapiens did not.
d) The size of their brain of Homo eructus was smaller to homo sapiens

6 By studying analogous structures we look for _____.

a) similarities in appearance and function but different in structure.
b) similarities in appearance but differences in functions.
c) Similarities in organ structure.
d) Similarities in cell make up.

7 _____ was a predecessor of Darwin and he developed the theory of acquired characteristics.

a) Weismann b) Mendel c) Malthus d) Lamarck

8 Which of these is not a living fossil?

a) Archaeopteryx b) Duck-billed platypus c) Lungfish d) Frog

9 Which of the following are not the examples of analogous structures?

a) Wings of bat and butterfly.
b) Wings of bat and forelimb of cattle.
c) Thorn and spine.
d) Tendril of Lathyrus and tendril of Gloriossa.

10 The scientist who cut off the tails of mice of successive generations to prove Lamarck's theory was wrong was _____.

a) Weismann b) Haeckel c) Darwin d) Wallace

11 Human being belongs to the species of_____.

a) Homo erectus

b) Homo habillis
c) Homo sapiens
d) Hominidae

12 Links between organisms that show branching pattern of evolutionary relationships are shown by_____.
a) living fossils
b) comparative embryology
c) phylogenetic trees
d) two fossil layers

13 Speciation is the evolutionary process by which _____.
a) a new gene pool is formed
b) evolutionary paths of species converge
c) hybrid species formed
d) Shows up differences in physical traits

14 Evidences of evolutionary relationships is found in _____.
a) atmosphere
b) fossils
c) ocean beds
d) rocks

15 Which of the following is not a source of variation in a population?
A. Inherited genetic differences.
B. Differences due to health.
C. Differences due to age.
D. None of the above.

16. Which of the following examples of variation is not important from an evolutionary standpoint?
A. Genetic differences between individual organisms comprising the population.
B. Inherited differences between individual organisms comprising the population.
C. Differences due to diet, health, age or accident that have no affect on an individual's ability to survive and reproduce.
D. A and B.

17. Why is genetic variation important from an evolutionary standpoint?
A. If all organisms were the same, the entire population would be vulnerable to particular pathogens, like viruses.
B. All evolutionary adaptations (e.g. the origin of forelimbs) are the result of the gradual build up of genetic differences between organisms over geologic time.
C. Evolution (at the population level) refers to changes in the frequencies of genes in the population over time.
D. All of the above.

18. Which of the following is an example of genetic variation?
A. Two children have different eye colors.
B. One person is older than another.
C. One person has a scar, but her friend does not.
D. Tod eats meat, but his brother Rod is a vegetarian.

19. Which of the following is an example of environmental variation?
A. Apu is a tongue roller, but his brother Sanjay is not.
B. Marge dyes her hair blue.
C. Homer inherited baldness from his father's side of the family.

D. Patti and Selma have hanging ear lobes.

20. What's the difference between natural selection and sexual selection?
    A. Sexual selection occurs during sex.
    B. Natural selection is a type of sexual selection.
    C. Sexual selection is a type of natural selection.
    D. Sexual selection occurs within demes, natural selection does not.
21. What's the difference between genetic drift and change due to natural selection?
    A. Genetic drift does not require the presence of variation.
    B. Genetic drift does not involve competition between members of a species.
    C. Genetic drift never occurs in nature, natural selection does.
    D. There is no difference.
22. According to our reading, how did George Cuvier account for extinctions in nature?
    A. Extinctions never occur--there are unexplored parts of the globe where organisms that appear to have gone extinct may still live.
    B. Extinctions occur when the slow adaptation of organisms over time to their environment is not quick enough to help them respond to changing conditions.
    C. Extinctions occur at random, they do not reflect God's will.
    D. Extinctions are due to catastrophic events.
23. Why, according to our reading, did Darwin take so long to publish the Origin of Species?
    A. Darwin wanted to share his theory as quickly as possible once he returned from his voyage on the Beagle.
    B. It took twenty years for Darwin to develop a theory.
    C. Darwin suffered from a number of illnesses.
    D. Darwin was concerned about the reaction of others to the implications of his theory.
24. In which of the following ways is natural selection not analogous to artificial selection?
    A. With natural selection "picking" is due to the fit of an organism with its environment; whereas in artificial selection, the breeder "picks" which organisms will breed.
    B. Natural selection depends upon the presence of variation, artificial selection does not.
    C. Natural selection occurs within populations, artificial selection does not.
    D. There is a limit to how much change can be brought about by natural selection, no such limit exists for artificial selection.
25. Why is the advent of reproductive isolation important from an evolutionary standpoint?
    A. When the organisms comprising two populations of a species can no longer interbreed, the flow of genetic material between them stops.
    B. It is not important from an evolutionary standpoint. The question is based on a false assumption.
    C. Reproductive isolation increases the mutation rate.
    D. Reproductive isolation may slow reproduction.
26. If the theory of natural selection is the survival of the fitness, and the fittest are identified as those who

    survive, why isn't it regarded as a tautology (a statement that is true only because of the meaning of the terms) ?
    A. The effect of traits on the fitness of an organism can be assessed independently of whether the organism indeed survives .
    B. It is regarded as a tautology - the question is based on a false assumption.
    C. There may be some statements in science that are useful even if they are not falsifiable or refutable in principle.
    D. A and C.

27. The variation natural selection operates on is due to random mutations. What does this imply about natural selection?
    A. Natural selection is also a random process.
    B. Natural selection is nevertheless a directed process- the likelihood one variant will be favored in a given environment over another is predictable, even if the origin is not.
    C. There is no possibility God could be involved in this process.
    D. A, B and C.
28. How was Mendel's work ultimately reconciled with Darwin's theory of natural selection during the evolutionary synthesis in the 1930s and 1940s?
    A. Scientists recognized that once one thinks about species as populations, rather than individuals, there is no incompatibility between them.
    B. Mendel's theory was replaced by the mutation theory.
    C. It was recognized much of the variation we observe in nature is due to recombination, rather than mutation.
    D. A and C.
29. Which of the following is the evidence for Darwin's theory of common descent?
    A. There are patterns in the fossil record that suggest other species have diverged from a single ancestor species.
    B. There are biogeographic patterns in the distribution of species, for instance distinct bird species on an island tend to resemble one another, suggesting a common ancestor.
    C. There are common stages in the early embryological development of organisms representing several distinct vertebrate groups.
    D. All of above
30. What is the relationship between the wing of a bird and the wing of a bat?
    A. They are homologous because they represent modified forms of a trait present in a common ancestor (forelimbs).
    B. They are analogous because while each carries out the same function (flight), this trait has arisen independently as a result of convergence (i.e. the common ancestor of both did not have a forelimb that allowed it to fly).
    C. A and B.
    D. They represent derived homologies.
31. Which of the following is not an example of a macro evolutionary process?
    A. One lion species splits to form two lion species over geological time.
    B. The same trait evolves independently in two different taxa (e.g. wings in birds and in insects).
    C. As a result of their activities, humans drive Dodos (a bird species) extinct.
    D. Over a short period of time, the frequency of a single gene declines from 10 to 8%.
32. Which of the following is an example of an ancestral homology?
    A. Almost all modern reptiles, birds and mammals have forelimbs, a trait they also share with contemporary amphibians.
    B. The first birds and all their descendant species have feathers, a trait that is unknown in any other group.
    C. Humans and many insect species have eyes.
    D. All of the above.
    E. None of the above.

33. Which of the following is not an example of micro evolutionary change?

A. The dark form of many moth species has increased in areas darkened by pollution.

B. Penicillin resistant forms of bacteria have arisen since the introduction of antibiotics.

C. The proportion of left and right bending moths in cichlid fish remains roughly 50:50.

D. The last American eagle dies off, leading to the extinction of the species.

34. Which of the following are difficult to explain in terms of natural selection?

A. Male peacocks evolve tail feathers that would appear to make them more rather than less vulnerable to predators.

B. Male deer evolve antlers that are not used to defend themselves against predators.

C. A bird issues a warning cry that puts it at greater risk of being noticed by a predator.

D. Some traits appear to have no adaptive value.

35. Which of the following is not an example of a monophyletic taxon?

A. The first fish species and every living organism that looks like a fish .

B. The first mammal species and all its descendants.

C. The first bird species and all its descendants.

D. All of the above.

36. Which of the following are kingdoms?

A. Monera .

B. Protista.

C. Animalae.

D. All of the above.

37. Which of the following must increase over geological time according to evolutionary biologists?

A. Size .

B. Complexity .

C. Speed of evolutionary processes such as mutation.

D. All of the above.

38. Why is similarity misleading when it comes to inferring evolutionary relationships?

A. Organisms that look alike may be very distantly related to one another.

B. Similarities between two species may be due to common descent, without indicating how closely the two are related to one another.

C. A and B only.

D. The presence of a shared derived character state is often misleading when it comes to inferring relationships between species .

39. Which of the following are the most distantly related to one another?

A. Sunfish and dolphins.

B. Tree frogs and snakes.

C. Vampire bats and birds.

D. Bears and whales.

40. How does an evolutionary biologist explain why a species of birds has evolved a larger beak size?

A. Large beak size occurred as a result of mutation in each member of the population.

B. The ancestors of this bird species encountered a tree with larger than average sized seeds. They needed to develop larger beaks in order to eat the larger seeds, and over time, they adapted to meet this need.

C. Some members of the ancestral population had larger beaks than others. If larger beak size was

advantageous, they would be more likely to survive and reproduce. As such, large beaked birds increased in frequency relative to small beaked birds.

D. The ancestors of this bird species encountered a tree with larger than average sized seeds. They discovered that by stretching their beaks, the beaks would get longer, and this increase was passed on to their offspring. Over time, the bird beaks became larger.

41. How might an evolutionary biologist explain why a species of species of salamander becomes blind after colonizing a cave?

A. It is possible that in the cave there is a source of pollution that increases the mutation rate for a gene that makes salamanders blind. Over time, due to exposure to this chemical, the members of the population lose their sight.

B. Members of the ancestral population that colonized the cave differed in their ability to see. If maintaining the ability to see in the cave was a waste of energy, blind salamanders might actually have more offspring than those who could see.

C. There is no way to explain this in terms of natural selection

D. The members of this salamander species no longer needed to use their eyes. Over time, due to lack of use, they lost the ability to see.

42. Which of the following is the most fit in an evolutionary sense?

A. A lion who is successful at capturing prey but has no cubs.

B. A lion who has many cubs, eight of which live to adulthood.

C. A lion who overcomes a disease and lives to have three cubs.

D. A lion who cares for his cubs, two of who live to adulthood.

43. How is extinction represented in a tree diagram?

A. A branch splits.

B. A branch ends.

C. A branch shifts along the X axis.

44. A biologist is trying to infer how five closely related species of snakes are related to one another. She notices that some of the snakes have forked tongues and others do not. Which of the following would help her distinguish the ancestral state?

A. She looks among snake fossils for evidence that being forked is a characteristic of the ancestor of this group, but determines no such fossils exist.

B. She locates a specimen of a more distantly related snake to see if it has a forked tongue.

C. She looks at a representative mammal species to see if it has a forked tongue.

D. She flips a coin.

D. A branch shifts along the Y axis.

45. The surface temperature of the sun is _____.

(A) 6000^{o} C (B) 9000^{o} C (C) 1000^{o} C (D) $10{,}000^{o}$ C

46. The earth like other planets formed from _____.

(A) aggregates of uranium (B) cloud of gas and dust

(C) division of pre-exiting planets (D) collisions of meteorites

47. The experiment to show the production of mice in 21 days from a dirty shirt placed in contact with kernels of wheat was carried out by _____.

(A) Francesco Redi (B) Jean Baptiste Van Helmont

(C) Aristotle (D) Louis Pasteur

48. The first formed organism (riboorganism) used only ..... for catalyzing reactions.

(A) DNA (B) amino acids (C) fatty acids (D) RNA

49. Anaerobic photosynthetic bacteria appeared on the earth about _____.

(A) 500 million years ago (B) 1500 million years ago

(C) 2500 million years ago (D) 3500 million years ago

50. The sequence of origin of life may be considered as _____.

(A) Amino acid Protein Chlorophyll

(B) Chlorophyll Starch Glycogen

(C) Nucleic acid Amino acid Chlorophyll

(D) Chlorophyll Nucleic acid Amino acid

51. The primitive cell-like colloidal particles capable of growth and division were _____.

(A) prokaryotes (B) coacervates (C) eobionts (D) chemoautotrophs

52. The stage for the evolution of autotrophs was set with the evolution of _____.

(A) RNA (B) DNA (C) ozone (D) chlorophyll

53. The first organism to be found on a bare rock is a (an) _____.

(A) moss (B) alga (C) lichen (D) fern

54. The doctrine of evolution is concerned with _____.

(A) gradual changes (B) abiogenesis (C) biogenesis (D) none of the above

55. The era called 'age of prokaryotic microbes' is _____.

(A) archaezoic (B) precambrian (C) phaenerozoic (D) proterizoic

56. The determine which molecules might have formed spontaneously on early earth, Stanley Miller used an apparatus with an atmosphere containing _____.

(A) oxygen, hydrogen and nitrogen

(B) oxygen, hydrogen, ammonia and water vapour

(C) oxygen, hydrogen and methane

(D) hydrogen, ammonia, methane and water vapour

57. The utilization of elements and compounds in nature generation theory because _____.

(A) life cycles (B) cyclic pathway (C) material cycles (D) recycling

58. What is ethnobotany ?

(A) Relationship between primitive plants and people

(B) Study to soil

(C) Cultivation of flower yielding plants

(D) Use of plants and their parts

59. The first photoautotroph organisms were _____.

(A) bryophytes (B) algae

(C) cyanobacteria (D) bacteria

60. Who performed this famous experiment to prove origin of life ?

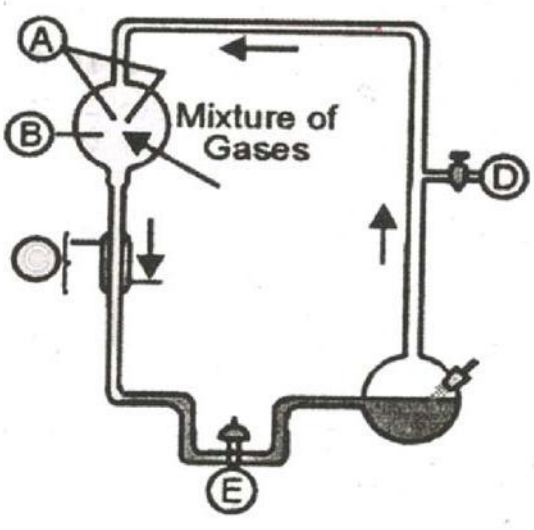
(A) Oparin and Haldane (B) Spallanzani and Pasteur

(C) Urey and Miller (D) Fox and Pasteur

61. How much temperature was used for the gases to react ?

(A) 10^{o} C (B) 130^{o} C (C) 1000^{o} C (D) 50^{o}C

62. What was the mixture of gases used in chamber marked A ?



(A) Methane (CH_4), ammonia (NH_3), hydrogen (H_2), and water (H_2O)

(B) Oxygen (O_2), ammonia (NH_3), hydrogen (H_2), and water (H_2O)

(C) Oxygen (O_2), ozone (O_3), hydrogen (H_2), and water (H_2O)

(D) all above

63. What was the resultant found in place marked E ?

(A) Glucose, fatty acids and lipids

(B) Some fatty acids and organic acids

(C) Some amino acids as glycine and alanine and

(D) Organic esters only

64. Match the appropriatc :

Column – I	Column – II
A. Cosmozoan theory	(i) Oxidizing environment rich in autotrophs like cyanobacteria
B. Spontaneous generation	(ii) Microspheres
C. Primary abiogenesis	(iii) Hot ball of gases
D. Atmosphere I	(iv) Oparin and Haldane
E. Atmosphere III	(v) Panspermia
F. Sydney Fox	(vi) Abiogenesis

	A	B	C	D	E	F		A	B	C	D	E	F
(A)	(v)	(vi)	(iv)	(iii)	(i)	(ii)	(B)	(i)	(ii)	(iii)	(iv)	(v)	(vi)
(C)	(ii)	(iii)	(i)	(v)	(vi)	(iv)	(D)	(vi)	(iv)	(iii)	(v)	(ii)	(i)

65. The first molecules formed for replicating cells

were most probably RNA. R. This was proved by

origin of ribozyme in 1987 by T. Cech in

Tetrahymena.

(A) If A and R both are true and R is correct explanation of A
(B) If A and R both are true but R is not correct explanation of A
(C) If A is true and R is wrong
(D) If A is wrong and R is true

66. Pick up the correct match

I. Core of the earth	A. Archaeozoic era
II. Life originated	B. Fe-Ni
III. Stromatolites	C. Inter-micromolecular assembly
IV. TMC is an example	D. Photosynthesizing algae

(A) I – B, II – A, III – D, IV – C (B) I – A, II – B, III – C, IV – D
(C) I – B, II – D, III – C, IV – A (D) I – A, II – B, III – D, IV – C

67. A. Arrhenius considered the panspermia mainly responsible for transfer for germs from other planets to Earth.
R. Present day study of meteorities as Allan Hills-84001 knocked out from Mars in Antarctica is rich aromatic hydrocarbons deposited by biological activity.
(A) If A and R both are true and R is correct explanation of A
(B) If A and R both are true but R is not correct explanation of A
(C) If A is true and R is wrong
(D) If A is wrong and R is true

68. A. The first molecules formed for replicating cells

were most probably RNA. R. This was proved by

origin of ribozyme in 1987 by T. Cech in

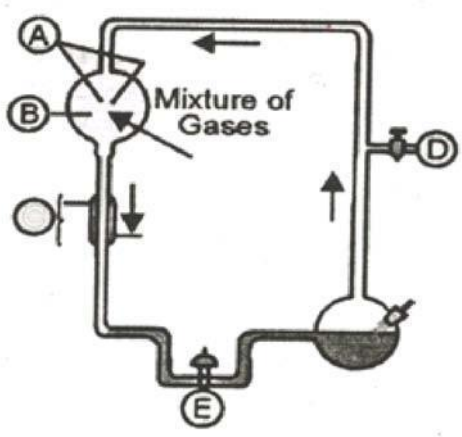
Tetrahymena.

(A) If A and R both are true and R is correct explanation of A
(B) If A and R both are true but R is not correct explanation of A
(C) If A is true and R is wrong
(D) If A is wrong and R is true

69. Coacervates are

(A) colloidal droplets (B) contain nucleoprotein (C) (A) and (B) (D) protobiont

70. The diagram represents Miller experiment. Choose the correct combination of labelling.



(A) A – electrodes, B – $NH_3 + H_2 + H_2O + CH_4$, C – cold water, D – Vacuum, E – U trap

(B) A – electrodes, B – $NH_4 + H_2 + CO_2 + CH_3$, C – hot water, D – Vacuum, E – U trap

(C) A – electrodes, B – $NH_3 + H_2O$, C – hot water, D – tap, E – U trap

(D) A – electrodes, B – $NH_3 + H_2 + H_2O + CH_4$, C – steam, D – Vacuum, E – U trap

71. The earliest organisms were _____.

(A) heterotrophic and anaerobic (B) autotrophic and anaerobic

(C) heterotrophic and aerobic (D) autotrophic and aerobic

72. Which one of the following is present today but was absent about 3.5 billion years ago ?

(A) Oxygen (B) Nitrogen (C) Hydrogen (D) Methane

73. Coacervates were experimentally produced by .....

(A) Sydney Fox and Oparin (B) Fischer and Huxley

(C) Jacob and Monod (D) Urey and Miller

74. Urey and Miller in their experiment used a mixture of gases corresponding to primitive earth. These were _____.

(A) C_3, NH_3, H_2, CO_2 (B) O_2, NH_3, CH_4, H_2

(C) NH_3, CH_4, H_2O, CO_2 (D) CH_4, NH_3, H_2, H_2O

75. According to abiogenesis life originate from _____.

(A) non-living matter (B) pre-exiting life

(C) chemicals (D) extra-terrestrial matter

76. Mega – evolution is _____.

(A) Changes in the gene pool

(B) evolution due to mutations

(C) origin of a new biological group

(D) the evolution that takes centuries

77. Evolutionary convergence is characterised by

(A) development of dissimilar characteristics in closely related groups

(B) development of a common set of characteristics in the groups of different ancestry

(C) development of characteristics by random mating

(D) replacement of common characteristics in different groups.

78. Parallelism is _____.
    (A) adaptive divergence
    (B) adaptive convergence
    (C) adaptive convergence of far off species
    (D) adaptive convergence of closely related groups.

79. Mesozoic era is associated with mass extinction of _____.
    (A) flowering plants (B) trilobites(C) Dodo (D) dinosaurs

80. Serial homology is exhibited by _____.
    (A) Organs of same individual occupying different levels of the body
    (B) Organs of different organisms with same function
    (C) appendages of various parts of prawn body
    (D) both (A) and (C)

81. Vermiform appendix in man, nictitating membrane and wisdom teeth are _____.
    (A) homologous organs (B) analogous organs
    (C) vestigial organs (D) none of the above

82. Which one of the following terms would most correctly describe the relationship between the flight organs of animals like locust, bat, swallow, and flying fish ?
    (A) Atavism (B) Analogous (C) Homologous (D) Vestigeal

83. Appearance of facial hair in some people is an example of
    (A) mongolism (B) analogous organs (C) atavism (D) all above

84. A living connecting link which provides evidence for organic evolution is _____.
    (A) Archeopteryx between reptiles and mammals
    (B) lung fish between pisces and reptiles
    (C) duck billed platypus between reptiles and mammals
    (D) Sphenodon between reptiles and birds

85. Von baer supports the theory of evolution on the basis of
    (A) embryological character (B) germs layers
    (C) somatic variations (D) genetic variations

86. Which of the following bird will be called most successfully evolved ?
    (A) Lays 2 eggs, 2 hatch and 2 reproduce
    (B) Lays 9 eggs, 9 hatch and 3 reproduce
    (C) Lays 5 eggs, 5 hatch and 5 reproduce
    (D) Lays 10 eggs, 5 hatch and 4 reproduce

87. Biogenetic law states that _____.
    (A) ontogeny repeats phylogeny (B) phylogeny repeats ontogeny
    (C) no two living organisms are alike (D) the favourable acquired characters are inherited

88. A study of evolution has established the systematic positions in many animals. In some animals chordate characters are absent in adult stage, but present in larval stage, eg. Herdmania has been included in _____.
    (A) crustacea (B) protochordata (C) dermaptera (D) onychophora

89. Many of the animals and plants found on islands are _____.

(A) endemic (B) exotic (C) sympatric (D) none of these

90. The Haeckel's theory of biogenetic Law means that _____.
(A) all organisms start as an egg
(B) life history of an organism reflects its evolutionary history
(C) nonliving matter from life
(D) progeny resembles parents

91. The best way of dating fossils recent origin is by _____.
(A) radio carbon method (B) uranium lead method
(C) potassium argon method (D) a combination of all these

92. The age of rock is calculated on the basis of _____.
(A) types of fossils present (B) number of strata present
(C) amount of uranium present (D) none above

93. It is not a true fossil.
(A) Placoderm (B) Limulus (C) Archeopteryx (D) Therapsid

94. all mammals, whale, dolphin, bat, monkey and horse have some common trait, but they also show conspicuous differences. This is due to the phenomenon of
(A) normalisation (B) genetic drift(C) convergence (D) divergence

95. These are some examples of vestigial structures in man
(A)wisdom tooth vermiform appendix, hair
(B) wisdom tooth, vermiform appendix, coccyx
(C) wisdom tooth, head, nails
(D) none of these

96. Precipitation test gives evidence from _____.
(A) comparative embryology (B) comparative anatomy
(C) comparative serology (D) none above

97. In external appearance the krait and lycodon are indistinguishable. This is an example of
(A) analogy (B) imitation (C) mimicry (D) homology

98. Postanal tail can be traced in _____.
(A) cobra (B) earthworm (C) scorpion (D) centipede

99. The Jurassic period belongs to the ..... era.
(A) proterozoic (B) archezoic
(C) mesozoic (D) cenozoic

100. Which of the following cannot determine phylogenetic relationships ?
(A) Physiology (B) Morphology
(C) Biogeography (D) Embryology

101. Mark the correct set.

Column I	**Column II**
I. Slow evolution	A. Non-progressive
II. Environment is responsible for evolution	B. Aristotle
III. Homologous wing	C. Bird wing and butterfly
IV. Analogous organ limb	D. Wing of bird and hose

(A) I – A, II – B, III – D, IV – C (B) I – B, II – A, III – D, IV – C

(C) I – B, II – A, III – C, IV – D (D) I – B, II – C, III – D, IV – A

102. A. Ear muscles of external ear in man are poorly developed

R. These muscles are useful which move external ear freely to detect sound efficiently.

(A) If A and R both are true and R is correct explanation of A

(B) If A and R both are true but R is not correct explanation of A

(C) If A is true and R is wrong

(D) If A is wrong and R is true

103. Mesozoic era is called golden period of _____.

(A) birds (B) amphibians (C) reptiles (D) pisces

104. Which of the following leads to evolution ?

(A) Separation of species leading to evolution

(B) Differentiation of species

(C) Loss of few advanced characters

(D) Differentiation and adaption of species as unique entities

105. Evolution and natural selection is demonstrated by

(A) DDT resistance in mosquito

(B) sickel cell anaemia in pygmies

(C) industral melanism

(D) all above

106. An important evidence in favour of organic evolution is the occurence of

(A) homologous and analogous organs

(B) homologous and vestigial organs

(C) analogous and vestigial organs

(D) homologous organs only

107. Potato and sweet potato _____.

(A) have edible parts which are homologous organs

(B) have edible part which are analogous organs

(C) have been introduced in India from the same place

(D) None of the above

108. Which one is not a vestigial organ in man ?

(A) Wisdom teeth (B) Muscles of external ear-pinna

(C) Fossa ovalis (D) Ileum

109. The tracking of evolutionary history of organisms is _____.

(A) ontogeny (B) phylogeny (C) analogy (D) homology

110. An old view about evolution states that the organisms were created by a super organism in the same condition as they exist now. This theory is called _____.

(A) theory of special creation (B) theory of natural selection

(C) Lamarck's theory of evolution (D) theory of spontaneous generation

111. Who gave evolutionary concept of determinants ?

(A) Dobzhansky (B) Wright (C) Weismann (D) Lamarck

112. Darwin's theory of natural selection is objected, because it

(A) stresses upon slow and small variations

(B) explains the adaption of certain inherited characters

(C) stresses on interspecific competition

(D) explains that natural calamities take a heavy annual toll of lives

113. Given : 1 = natural selection ; 2 = variations and their inheritance ; 3 = survival of the fittest ; 4 = struggle for existence. According to Darwinism, which of the following represents the correct sequence of events in the origin of new species ?

(A) 1, 2, 3, 4 (B) 2, 3, 1, 4

(C) 3, 4, 1, 2 (D) 4, 2, 3, 1

114. Theory of Lamarck was based on

(A) adaptive collisions (B) adaptive rediations

(C) adaptive modifications (D) none of these

115. Darwin's natural selection is based on

(A) variations

(B) prodigality, struggle for existence, survival of fittest

(C) law of use and disuse

(D) law of inheritance of acquired characters

116. Industrial melanism is an example of

(A) natural selection (B) mutation

(C) adaptive convergence (D) artificial selection

117. Which statement is correct ?

(A) Lamarck theory – Struggle for existence

(B) Darwin theory – Use and disuse of organ

(C) Biogentic law – Recapitulation theory

(D) Lamarck theory – Theory of continuity of germplasm

118. Match the correct set.

Column I	Column II
I. Modified form of Lamarckism	A. G.L. Stebbins (1950)
II. Variation and evolution in plants	B. Neo- Lamarckism
III. Germinal selection theory	C. Etienne Geoffroy
IV. Supporter of Lamarck's theory	D. August Welsmann

(A) I – A, II – B, III – C, IV – D

(B) I – D, II – B, III – C, IV – A

(C) I – A, II – B, III – D, IV – C

(D) I – D, II – A, III – C, IV – B

119. A. Mutations occurring in the germinal cells of the gonads are called germs mutations. R. They are heritable raw materials for natural selection lead to origin of new species.

(A) If A and R both are true and R is correct explanation of A

(B) If A and R both are true but R is not correct explanation of A

(C) If A is true and R is wrong

(D) If A is wrong and R is true

120. A. All the finches on the Galapagos Islands descended from common ancestor.

R. They show variations only in their beaks as they got adapted to different feeding habits.

(A) If A and R both are true and R is correct explanation of A

(B) If A and R both are true but R is not correct explanation of A

(C) If A is true and R is wrong

(D) If A is wrong and R is true

121. Cosmozoic theory was given by _____.

(A) Darwin (B) Richter (C) Aristotle (D) Von Baer

122. Which one of the following phenomena supports Darwin's concept of natural selection in organic evolution ?

(A) Development of transgenic animals

(B) Production of 'Dolly' the sheep by clothing

(C) Prevalence of pesticide resistant insects

(D) Development of organs from 'stem cells' for organ transplantation

123. Retrogressive evolution is shown by _____.

(A) man (B) birds (C) tunicates (D) fish

124. Match the correct set.

Column I	Column II
I. Fossil	A. 345-405 million years ago
II. Devonian period	B. Fossillium
III. Cambrian period	C. 425-500 million years ago
IV. Ordovician period	D. 500-600 million years ago

(A) I – B, II – A, III – D, IV – C

(B) I – A, II – B, III – C, IV – D

(C) I – B, II – C, III – D, IV – A

(D) I – B, II – D, III – C, IV – A

125. A. Genetic drift refers to change in allelic frequencies of a gene pool due to chance and occurs both in large and small populations.

R. Small populations will, therefore, suffer more than larger ones.

(A) If A and R both are true and R is correct explanation of A

(B) If A and R both are true but R is not correct explanation of A

(C) If A is true and R is wrong

(D) If A is wrong and R is true

126. In a population, group of individuals of similar phenotypes are formed due to differential reproduction due to

(A) genetic drift (B) natural selection

(C) migration (D) selective hybridization

127. Phylogenetic evolution refers to

(A) genetic relationship and evolutionary sequence

(B) similar habitat

(C) natural affinity of genes

(D) similar character

128. Genetic drift occurs when few individuals of a colonize, the phenomenon is

(A) bottleneck effect (B) assortative mating(C) founder's effect (D) random mating

129. Sympatric speciation arises due to

(A) non-overlapping population of the same area

(B) geographical isolation

(C) overlapping population of the same area

(D) non-reproductive population of the same area

130. Hardy – Weinberg equilibrium is known to be effected by gene flow, genetic drift, mutation, genetic recombination and
(A) evolution
(B) limiting factor
(C) saltation
(D) natural selection

131. Assertion : According to Hardy – Weinberg Equilibrium, the frequency of an allele remains the same generation after genetation.
Reason : The only way to bring about a change is by natural selection.
(A) A is correct and R is its explanation.
(B) A and R both are correct but R is not an explanation to A
(C) A is correct and R is false
(D) A is false and R is correct

132. Which is not applicable to the Biological species concept ?
(A) hybridization (B) natural population
(C) reproductive isolation (D) gene pool

133. Mass extinction of the end of Mesozoic era was probably due to ?
(A) continental drift (B) the collision of earth with large meteorites
(C) massive glaciations (D) change in earth's orbit

134. Apes share ..... blood groups with man
(A) A, B, AB (B) A, B, O (C) AB, O (D) A and B only

135. Present age of human known as _____.
(A) atomic age (B) iron age (C) bronze age (D) silver age

136. Who was the first civilized man ?
(A) Cro-magnon man (B) Neanderthal man
(C) Java ape man (D) Peking man

137. Leakey and Leakey discovered the fossils of _____.
(A) apeman (B) erect man
(C) Peking man (D) the tool maker

138. The correct sequence of course of cultural evolution from cromagnon to modern man is
(A) Palaeoilthic – Mesolethic – Neolithic – Bronze – Iron – Atomic
(B) Mesolethic – Bronze – Neolithic – Iron – Atomic
(C) Palaeolithic – Neolithic – Iron – Bonze – Atomic
(D) None above

139. Neanderthal man differs from modern man is _____.
(A) receeding jaw (B) protuding jaw
(C) could make good tools (D) could make good picture

140. 'Piltdown man' is
(A) Hemo habilis (B) Eoanthropus
(C) Homo sapiens (D) Pithecanthropine

141. The most recent in human evolution is _____.
(A) mesolithic (B) neolithic
(C) upper palaeolithic (D) middle palaeolithic

142. Which one of the following statement is correct ?

(A) Homo erectus is the ancestor of man

(B) Fossils of Cro – magnon has been found in Ethopia

(C) Australopithecus is the real ancestor of modern man

(D) Neanderthal man is the direct ancestor of Homo sapience

143. The evolution of genera 'Homo' occured in

(A) pleistocene(B) pliocene(C) miocene(D) oilgocene

144. Closest primate to man is _____.

(A) gorilla (B) rhesus monkey (C) orangutan (D) lemur

145. Which is correct according to cranial capacity from the figure given as examples?

(A) A = 104 cc, B = 355 cc, C = 500 cc, D = 405 cc, E = 1400 cc

(B) A = 355 cc, B = 104 cc, C = 500 cc, D = 405 cc, E = 1400 cc

(C) A = 104 cc, B = 355 cc, C = 405 cc, D = 500 cc, E = 1400 cc

(D) A = 355 cc, B = 104 cc, C = 405 cc, D = 500 cc, E = 1400 cc

146. Match the correct set

Column – I	**Column – II**
A. Old world monkeys	1. Tree shrews, the ancestors of primates
B. New world monkeys	2. Wide nistrils and prehensile tail
C. Prosimians	3. Narrow nostrils and non prehensile tail
D. Simians	4. Monkey and apes

(A) 2 3 1 4

(B) 3 2 1 4

(C) 2 1 3 4

(D) 1 3 2 4

147. Match the features from the columns

Column – I	**Column – II**
A. Ape like primate	1. Homo erectus
B. Ancestor of modern apes	2. Australopithecus
C. Connecting link between ape and man	3. Dryopithecus
D. First to use fire	4. Propliopethecus

A B C D

(A) 3 4 2 1

(B) 4 3 2 1

(C) 3 4 1 2

(D) 4 2 1 3

148. A. Java man and peking men were called Homo erectus by Mayer.

R. They appeared same as both used fire.

(A) A is correct and R is its explanation.

(B) A and R both are correct but R is not an explanation to A

(C) A is correct and R is false

(D) A is false and R is correct

149. A. From evolutionary point of view, human gestation period is believed to be shortening.

R. One major evolutionary trend in humans has been the larger head undergoing relatively faster growth rate in the foetal stage.

Read the above statement the answer according

(A) If A and R both one correct and R is an explanation to A

(B) If A and R both are correct and R is an explanation to A

(C) If A is correct and R is wrong

(D) If A is wrong and R is correct

150. There are two opposing views about origin of modern man, According to the view Homo erectus in Asia were the ancestors of modern man. A study of variation of DNA however suggested African origin of modern man. What kind of observation on DNA variation could suggest this ?

(A) Greater variation in Africa than in Asia

(B) Variation only in Asia and no variation in Africa

(C) Greater variation in Asia than in Africa

(D) Similar variation in Africa and Asia

151. The first man to use fire was _____.

(A) neanderthal man
(B) Homo erectus (C) cro-magnon man (D) Australopithecus

152. A human species who were more intelligent than the present human beings

(A) Ramapethicus (B) Australopithicus africanus

(C) Homo erectus (D) Homo fossilis

153. Human evolution actually started in _____.

(A) France (B) America (C) Central Asia (D) Africa

154. Peking man is known as _____.

(A) Australopithecus (B) Sinanthropus (C) Pithcanthropus (D) Homo sapiens

155. Which of the following is correct match regarding cranial capacity and location of respective fossil.

(A) Australopithecus – Africa (450 600 CC) (B) Java man – Germany (800 CC)

(C) Neanderthal – Africa (500–600 CC) (D) Homo sapiens – South east Asia

156. Which one of the following ancestors of man first time showed bipedal movement ?

(A) Australopithecus (B) Cro-magnon (C) Java apeman (D) Peking man

157. One of the oldest, best preserved and most complete hominid fossil commonly known as 'Lucy' belongs to the genus.

(A) Oreopithecus (B) Dryopithecus (C) Pithecanthropus
(D)Australopithecus

ANSWER KEYS

1 D	2 B	3 A	4 B	5 D	6 A
7 D	8 A	9 B	10 A	11 C	12 C
13 A	14 B	15 D	16 C	17 D	18 A
19 B	20 C	21 B	22 D	23 D	24 A
25 A	26 D	27 B	28 D	29 D	30 C
31 D	32 A	33 D	34 D	35 A	36 D
37 D	38 C	39 A	40 C	41 B	42 B
43 B	44 B	45 A	46 B	47 B	48 D
49 D	50 C	51 C	52 D	53 C	54 C
55 A	56 D	57 C	58 A	59 D	60 C
61 B	62 A	63 C	64 A	65 A	66 A
67 A	68 A	69 C	70 A	71 A	72 A
73 D	74 D	75 A	76 C	77 D	78 D
79 D	80 D	81 C	82 B	83 C	84 C
85 A	86 C	87 A	88 B	89 A	90 B
91 D	92 C	93 B	94 D	95 B	96 C
97 C	98 A	99 C	100 B	101 A	102 C
103 C	104 D	105 D	106 B	107 B	108 D
109 B	110 A	111 B	112 B	113 C	114 B
115 A	116 C	117 C	118 C	119 A	120 B
121 C	122 B	123 A	124 A	125 A	126 A
127 C	128 D	129 D	130 A	131 D	132 A
133 C	134 C	135 D	136 A	137 A	138 A
139 A	140 D	141 D	142 A	143 B	144 A
145 A	146 C	147 B	148 A	149 D	150 C
151 B	152 D	153 D	154 B	155 A	156 A
157 D					

NEET Biology MCQ

CHAPTER – 8 HUMAN HEALTH AND DISEASES

1. Which of the following is a part of the innate (non-specific) immunity?
   (i) Lysozymes (ii) B cells (iii) T cells (iv) antigen presenting cells
2. Which of the following is not a component of innate immunity?
   (i) antibodies (ii) interferons (iii) complement proteins (iv) phagocytes
3. Histamines are released from
   (i) macrophages (ii) T lymphocytes (iii) mast cells (iv) natural killer cells
4. Natural killer cells destroy the target cell by
   (i) phagocytosis (ii) producing antibodies (iii) releasing histamines
   (iv) creating perforin-lined pores
5. One of the unique features of adaptive immunity is
   (i) discrimination between self and non-self (ii) interferons (iii) inflammatory response (iv) monocytes
6. The function of helper T- cells is to
   (i) stimulate B cells (ii) kill the antigen (iii) kill the antibodies (iv) suppress B cells
7. The anti-viral proteins released by a viral attacked cell are called
   (i) histamines (ii) pyrogens (iii) interferons (iv) allergens
8. Antigen-antibody complex is formed at the
   (i) 'constant' regions of light chain (ii) 'variable' regions of light chain
   (iii) 'constant' region of light and heavy chain (iv) 'variable' region of light and heavy chain
9. Function of immunoglobulin IgA is
   (i) protection from inhaled pathogens (ii) activation of B cells
   (iii) mediator in allergic response (iv) stimulation of complement system
10. The most abundant immunoglobulin class is of
    (i) IgA (ii) IgD (iii) IgE (iv) IgG
11. The secondary immune response is due to
    (i) memory cells (ii) clone cells (iii) T cells (iv) B cells
12. The primary lymphoid organs are
    (i) lymph nodes (ii) spleen (iii) bone marrow (iv) tonsils
13. What did Dr. Jenner inoculate in the boy for the first time?
    (i) live cowpox virus (ii) dead cowpox virus (iii) live small pox virus
    (iv) dead small pox virus
14. To protect a person against tetanus, inoculation of one of the following would save life
    (i) attenuated organisms (ii) killed tetanus bacteria (iii) tetanus antibodies
    (iv) dead bacteria
15. The cells that actually release the antibodies are
    (i) helper T cells (ii) cytotoxic T cells (iii) plasma cells (iv) pyrogens
16. A person without thymus would not be able to
    (i) reject a tissue transplant (ii) develop an inflammatory response
    (iii) produce antibodies (iv) fight cold and cough

17. The antigen- antibody reaction during allergies releases
    (i) interferons (ii) pyrogens (iii) allergens (iv) histamines
18. The following blood transfusion would lead to clotting due to incompatibility
    (i) A given to AB (ii) O given to A (iii) AB given to A (iv) B given to B
19. Haemolytic disease of the newborn (HDN) occurs when
    (i) h^- mother bears $^+$ foetus (ii) Rh^+ mother bears Rh^- foetus
    (iii) O^+ mother bears A^+ foetus (iv) O^+ mother bears A^- foetus
20. Immunodeficiency can result from which of the following
    (i) gene mutation (ii) infection (iii) malnutrition (iv) all of the above
21. HIV attacks which of the following?
    (i) B cells (ii) T cells (iii) antigen presenting cells (iv) T- helper cells
22. Which of the following properties of acquired immunity is the basis of vaccination?
    (i) specificity (ii) diversity (iii) memory (iv) discrimination between self and non-self
23. The following disease is an autoimmune disease
    (i) multiple sclerosis (ii) malaria (iii) tetanus (iv) cholera
24. Human immunodeficiency virus (HIV) contains
    (i) reverse transcriptase (ii) DNA (iii) double-stranded RNA (iv) nuclear mmembrane
25. Which one of the following is a synthetic drug?
    (i) morphine (ii) amphetamines (iii) cocaine (iv) charas
26. Which one of the following is not a derivative of opium?
    (i) morphine (ii) codeine (iii) heroin (iv) cocaine
27. Amphetamines have the following effect on the body.
    (i) cause drowsiness (ii) bring hallucinations (iii) stimulate the body
    (iv) depress the body
28. Which drugs are commonly called sleeping pills?
    (i) barbiturates (ii) amphetamines (iii) opiate narcotics (iv) LSD
29. Which one of the following is a psychedelic drug?
    (i) opium (ii) LSD (iii) cocaine (iv) morphine
30. Which one of the following drugs causes hallucinations?
    (i) LSD (ii) caffeine (iii) opium (iv) amphetamines
31. Which one of the following is not a teratogen?
    (i) thalidomide (ii) amphetamines (iii) german measles (iv) X-rays
32. Which one of the following is not an effect of tobacco?
    (i) blood vessels are dilated (ii) blood pressure increases
    (iii) nerve cells are stimulated (iv) heartbeat increases
33. Tobacco smoke does not contain
    (i) tar (ii) polycyclic aromatic hydrocarbons (iii) carbonmonoxide (iv) codeine
34. Emphysema is a disease of
    (i) pharynx (ii) larynx (iii) lungs (iv) mouth
35. Which of the following is called as “drinking alcohol”?
    (i) methyl alcohol (ii) ethyl alcohol (iii) isopropyl alcohol (iv) methanol

36. Alcohol is a
(i) stimulant (ii) depressant (iii) barbiturate (iv) amphetamine
37. What happens to alcohol in the cells?
(i) it is broken to harmless substances (ii) it is oxidised and heat is produced
(iii) it dehydrates the cell (iv) it is stored as fat
38. Which one of the following is not true during excessive intake of alcohol?
(i) decreased reaction time (ii) blurred vision
(iii) impaired judgement (iv) lack of alertness
39. Pyrogens are the chemicals released by
(i) pathogens (ii) WBC (iii) RBC (iv) antibodies
40. The terms allergens refers to
(i) specific antibodies (ii) weak antigens
(iii) memory cells (iv) fever-producing chemicals
41. The interferons make the cells resistant to
(i) bacterial attack (ii) protozoan attack (iii) microbial attack (iv) viral attack
42. Which one of the following diseases contracted by the droplet infection?
(i) chicken pox (ii) malaria (iii) pneumonia (iv) rabies
43. Malaria is caused by
(i) Culex mosquito (ii) Anopheles mosquito (iii) Plasmodium (iv) contaminated food
44. The disease ringworm is caused by
(i) bite of a mosquito (ii) fungal infection (iii) worm (iv) bacterial infection
45. Cancer that affect and arise in the mesodermal tissue are called
(i) carcinomas (ii) melanomas (iii) sarcomas (iv) lymphomas
46. Leukemia is often referred to as
(i) skin cancer (ii) blood cancer (iii) bone cancer (iv) lymph cancer
47. Agents that produce cancers are called
(i) carcinogens (ii) cancerous (iii) tumours (iv) radiations
48. Non-sedative drugs Thlidomide caused Phocomelia characterised by the symptom
(i) Malformed limbs of foetus (ii) Malformation of foetus
(iii) Vomiting of female during delivery (iv) Mental retardation of foetus
49. ELISA is used to detect viruses where the key agent is
(i) RNase (ii) Catalase (iii) DNA probe (iv) Alkaline phophatase
50. Which of the following is also known as HIV factory?
(i) Mast cells (ii) Macrophages (iii) memory cells (iv) T- cells

****

ANSWER KEY

Q.NO	Answer
1	iii
2	iv
3	iii
4	i
5	i
6	i
7	iii
8	iv
9	i
10	Iv
11	i
12	iii
13	iv
14	iii
15	i
16	iv
17	iv
18	iv
19	i
20	iv
21	iv
22	iii
23	i
24	i
25	ii
26	iv
27	iii
28	I
29	ii
30	ii
31	Ii
32	iii
33	iv
34	iii
35	i
36	i
37	ii
38	ii
39	i
40	ii
41	iv
42	iii
43	iii
44	ii
45	iii
46	ii
47	i
48	I
49	i
50	Ii

MCQs for NEET

STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION

1. A group of animals which are related by descent and share many similarities are referred to as
   a) Breed b)race c) variety d) species
2. Sonalika and Kalyan sona are varieties of
   a) Wheat b)Rice c) Millet d) Tobacco
3. In virus-infected plants, the meristematic tissues in both apical and axillary buds are freee of virus because
   a) The dividing cells are virus resistant
   b) Meristems have anti-viral compounds
   c) The cell division of meristems are faster than rate of viral multiplication
   d) Viruses can not multiply within meristem cells
4. Use of certain chemicals and radiation to change the base sequence of genes of crop plants is termed
   a) r DNA technology b) transgenic mechanism c) mutation breeding
   b) gene thearapy
5. The scientific process by which crop plants are enriched with certain desirable nutrients is called
   a) Crop protection b) breeding c) biofortfication d)bioremediation
6. Given below are a few statements regarding somatic hybridization. Choose the correct statemernt
   a) Protoplasts of different cells of the same plant are fused
   b) Protoplasts from cells of different species can be fused
   c) Treatment of cells with cellulose and pectinase is mandatory
   d) The hybrid protoplast contains characters of only one parental protoplast
      a) II and III b) I and II c) III and II d) II and III
7. To isolate protoplast, one needs
   a) Pectinase b)cellulose c) both celluase and pectinase d) chitinase
8. Which one of the following is a marine fish
   a) Rohu b) Hilsa c) Catla d) common carp
9. More than 70% of livestock population is in
   a) Denmark b) India c) China d) India and China
10. Selection of homozygous plant is
    a) Mixed selection b) Mass collection c) Pureline selection d) None of these
11. Which one of the following helps in absorption of phosphorus from soil by the plants
    a) Anabaena b) Glomus c) Rhizobium d) Frankia
12. Somaclones are obtained by
    a) Genetic Engineering b) Tissue culture c) Plant breeding d) Irridiation
13. Which one of the following pair is incorrectly matched in respect to the crop varieties for disease-resistance
    a) Cow pea - bacterial blight

b) Brassica - white rust
c) Wheat - Leaf and stripe rust
d) Cauliflower - TMV and leaf curl

14. Jaya and Ratna developed for Green Revolution in India are varieties of
    a) Bajra b) Maize c)Rice d) Wheat
15. The capacity to generate a whole plant from any cell/explant is called
    a) Pleuripotency b) Cell cloning c) Tissue culture d) Totipotency
16. In maize, hybrid vigour is exploited by
    a) Bombarding the protoplast with DNA
    b) Crossing of two inbreed parental lines
    c) Harvesting the seeds from the most productive plants
    d) Inducing mutations
17. Micro-organisms used as bio pesticides is
    a) Fungi b) Protozoa c) Bacteria d) All of these
18. Outbreeding is an important strategy of Animal husbandry because it
    a) Is useful in overcoming Inbreeding depression
    b) Is useful in producing purelines of animals
    c) Helps in accumulation of superior genes
    d) Expose harmful recessive genes that are eliminated by selection.
19. Cryopreservation of germplasm is done at
    a) -196 C b) -273 C c) -50C d) 0 C
20. Which of the following statement is NOT correct about MOET?
    a) Genetic mother is available for another round of ovulation
    b) Cow is administered hormones like FSH like activity
    c) This technology has been administered for cattle, sheep, rabbit, buffaloes etc.,
    d) The fertilized egg at 8 -32 cell stages are recovered surgically and transferred to surrogate mothers
21. What is the best way to overcome Inbreeding depression in animals
    a) Out crossing b) out breeding c) cross breeding d) None of the them
22. At which stage of embryo, MOET is used?
    a) 4 – 8 cell stage b) 8 – 32 cell stage c) 16 – 32 cell stage d) 32 to – 64 cell stage
23. In human civilization, when was plant breeding and agriculture started
    a) 50000 to 60000 years ago b) 30,000 to 40,000 years ago
    b) 9000 to 11000 years ago d) 20000 years ago
24. Name the hybrid sheep produced from crossing Bikaneri ewes and Marino rams.
    a) Hisardale b) Bannur c) Lohi d) Zulu
25. The chances of contacting bird flu from a properly cooked (above 100 C) chicken and egg are
    a) Very high b) high c) moderate d) none
26. Inbreeding is carried out in animal husbandry because it:
    a) Increases vigour b)improves the breed c) increases heterozygosity
    b) Increases homozygosity
27. Which one of the following is not a fungal disease?

a) Rust of wheat b) Smut of Bajra c) Black rot of crucifers
b) Red rot of sugarcane

28. Several south indian states raise 2 – 3 crops of rice annually. The agronomic feature that makes this possible is because of
    a) Shorter rice plant b) better irrigation facilities c) Early yielding rice variety
    b) Disease resistant rice variety
29. Which one of the following combination would a sugarcane farmer, look for in the sugarcane crop?
    a) Thick stem, long internodes, high sugar content and disease resistant
    b) Thick stem, high sugar content and profuse flowering
    c) Thick stem, short internodes, high sugar content, disease resistant
    d) Thick stem, low sugar content and disease resistant
30. Fungicides and antibiotics are chemicals that:
    a) Enhance yield and disease resistance
    b) Kill pathogenic fungi and bacteria, respectively
    c) Kill all pathogenic microbes
    d) Kill pathogenic bacteria and fungi, respectively
31. Use of certain chemicals and radiation to change the base sequence of genes of crop plants is termed:
    a) rDNA technology b) Transgenic mechanism c) Mutation breeding
    b) Gene therapy
32. The term 'totipotency' refers to the capacity of a
    a) Cell to generate whole plant b) Bud to germinate to whole plant
    b) Seed to germinate d) Cell to enlarge in size
33. Given below are a few statements regarding somatic hybridization. Choose the correct statements.
    I) Protoplasts of different cells of the same plant are fused
    II) Protoplasts from cells of different species can be fused
    III) Treatment of cells with cellulose and pectinase is mandatory
    IV) The hybrid protoplast contains characters of only one parental protoplast
    a) I and III b) I and II c) I and IV d) II and III
34. An explant is:
    a) Dead plant b) part of the plant c) part of the plant used in tissue culture
    b) Part of the plant that expresses a specific gene
35. The biggest constraint of plant breeding is :
    a) Availability of desirable gene in the crop and its wild relatives
    b) Infrastructure
    c) Trained manpower d) transfer of genes from unrelated sources
36. Lysine and tryptophan are:
    a) Proteins b) Non-essential amino acids c) essential amino acids d) aromatic amino acids
37. Micro-propagation is:
    a) propagation of microbes in vitro b) Propagation of plants in vitro
    b) Propagation of cells in vitro d) Growing plants on smaller scale

38. Protoplast is :
    a) Another name for protoplasm b) an animal cell c) a plant cell without cell wall
    b) A plant cell
39. To isolate protoplast, one needs:
    a) Pectinase B) Cellulase c) Both pectinase and cellulose d) chitinase
40. Which one of the following products of apiculture is used in cosmetics and polishes:
    a) Honey b) Oil c) wax d) Royal jelly
41. 33 percent of India's GDP comes from :
    a) Industry b) Agriculture c)Export d) small scale cottage industry
42. A collection of all the alleles of all the genes of a crop plant is called:
    a) Germplasm collection b) Protoplasm collection c) Herbarium
    b) Somaclonal collection
43. The agriculture sector of india employs about:
    a) 50% of the population b) 70% of the population
    a) 30% of the population d) 60% of the population
44. Which one of them is fresh water fish:
    a) Common carp b) Pomfrets c) Sardines d) Hilsa
45. Which one of the crop species are not usually pollinated by bees:
    a) Sunflower b) apple c) paddy d) peas
46. Which one of the following is a disease resistant wheat variety :
    a) Pusa kamal b) Himgiri c) Pusa swarnum d) Pusa sadabahar
47. Which one of the crop variety was not introduced by Prof. Borlaug, the father of green revolution :
    a) sonalika b) kalyan sona c) IR-8 d) Jaya
48. Which one of them below is insect pest resistant variety of Brassica
    a) Pusa Gaurav b) Pusa sawani c) Pusa A-4 d) Pusa Sem2
49. Name the alga whih can be cultured in waste water to produce food needed for us :
    a) Spirulina b) chlorella c) spirogyra d) None of them
50. Which one of them is not a fungal disease of crop plants :
    a) rust b) smut c) red rot of sugarcane d) blight

CHAPTER: MICROBES IN HUMAN WELFARE

(MULTIPLE CHOICE QUESTIONS)

1. Which one is biofertilizer?
   (a) Mycorrhiza
   (b) (b)N_2 Fixing bacteria
   (c) (c) N_2 Fixing cyanobacteria
   (d) (d) All the above
   Answer : (d)

2. Which one is wrongly matched?
   (a) Streptomyces- Antibiotics
   (b) Coliform- Vinegar
   (c) Methanogens- Gobar gas
   (d) Yeast- Ethanol

   Answer : (b)

3. Highest number of antibiotics are produced by:
   (a) Streptomyces
   (b) (b) Bacillus
   (c) (c) Penicillium
   (d) (d) Cephalosporium

   Answer : (d)

4. One of the following is not a biofertiliser:
   (a) Azotobacter
   (b) Bacillus thuringiensis
   (c) Clostridium
   (d) Azolla
   Answer : (b)

5. Secondary sewage treatment is mainly a :
   (a) Chemical process
   (b) Biological process
   (c) Physical process
   (d) Mechanical process
   Answer : (b)

6. "Bt" toxin is :
   (a) Intracellular lipid
   (b) Intracellular crystalline protein
   (c) Extra cellular crystalline protein
   (d) Lipid

   Answer : (b)

7. Spirulina is:
   (a) Biofertilizer
   (b) Biopesticide
   (c) Edible fungus
   (d) Single cell protein

   Answer : (d)

8. Cheese is a product of:
   (a) Distillation
   (b) Fermentation
   (c) Pasteurisation
   (d) Dehydration
   Answer : (b)

9. Which one of the following alcoholic drinks is produced without distillation?
   (a) Wine (b) Whisky (c) Rum (d) Brandy
   Answer : (a)

10. The free living fungus Trichoderma can be used for:
   (a) Killing insects (b) Biological control of plant diseases
   (c) Controlling butterfly caterpillars (d) Producing Antibiotics
   Answer : (b)

11. Which one of the following processes CO_2 is not released?
   a) Alcoholic fermentation
   b) Lactate fermentation
   c) Aerobic respiration in plants
   d) Aerobic respiration in animals
   Answer:(b)

12. High value of B O D (Biochemical Oxygen Demand) shows
   a) water is normal

b) water is highly polluted
c) water is less polluted
d) none of these

Answer:(b)

13. Which of the following is fermentation process?
    a) batch process
    b)continuous process
    c) both a and b
    d) none of these

Answer:(C)

14. Who showed that Sacchaaromyces cerevisiae causes fermentation forming products such as beer and buttermilk?
    a) Louis Pasteur
    b) Alexander Fleming
    c) Selman Waksman
    d) Schatz

    Answer:(a)

15. Rennet is used in
    a) bread making
    b) fermentation
    c) cheese making
    d) antibiotics synthesis

    Answer:(c)

16. Tissue plasminogen activator is
    a) a vitamin
    b) an Enzyme
    c)a chemical that stimulates tissue differentiation
    d) amino acid

    Answer:(b)

17. A bioreactor is
    a) hybridoma
    b) Culture containing radioactive isotopes
    c) Culture for synthesis of new chemicals
    d) Fermentation tank

Answer:(d)

18. Humulin is
    a) carbohydrate
    b) protein
    c) fat
    d) antibiotics

    Answer:(b)

19. Which of the following can be application of fermentation?
    a) tanning of leather
    b) curing of tea
    c) production of vine
    d) all of these

    Answer:(d)

20. Enzyme immobilisation is
    a) conversion of an active enzyme into inactive form
    b) providing enzyme with protective covering
    c) changing a soluble enzyme into insoluble state
    d) changing pH so that enzyme is not able to carry out its function

    Answer:(b)

21. Biogas is produced by
    a) aeobic breakdown of biomass
    b) anaerobic break down of biomass
    c) with the help of methanogenic bacteria
    d) both b and c

    Answer:(d)

22. Name the first organic acid produced by microbial fermentation
    a) citric acid
    b) lactic acid
    c) acetic acid
    d) none of the above

    Answer:(b)

23. The residue left after methane production from cattle dung is:

    (a) Burnt (b) Burried in landfills
    (c) Used as manure (d) Used in civil construction

Answer:(d)

24. Pencillin inhibits bacterial mulitiplication because it
    (a) Checks RNA synthesis (b)Checks DNA synthesis
    (c) Destroys chromatin (d) Inhibits cell wall formation
    Answer:(d)

25. Biogas production from waste biomass with the help of methanogenic bacteria is:
    (a) Onestep process (b) Twostep process
    (c) Threestep process (d) Multistep process
    Answer:(c)

26. Aquatic fern which is excellent biofertiliser:
    (a) Azolla (b) Salvinia (c) Marsilea (d) Pteridium
    Answer:(a)

27. Most famous bacterial fertilizer is:
    (a) Nitrosomonas (b) Nitrobacter (c) Nitrosococcus (d) Rhizobium
    Answer:(d)

28. Group of bacteria used in biogas production is
    (a)Methane (b) Methanol (c) Oxygen (d) NO_2
    Answer:(d)

29. In 1928, a scientist discovered the first effective antibiotic. Scientist and antibiotic are:
    (a) Fleming – Streptomycin (b) Fleming – Penicillin
    (c) Waksman – Penicillin (d) Waksman – Streptomycin
    Answer:(b)

30. Azolla has a symbiotic association with :
    (a) Rhizobium (b)Anabaena (c)Nostoc (d)Azospirillium
    Answer:(b)

31. Devine and collego are:
    (a) Bioinsecticides (b)Biofungicide (c) Bioherbicides (d) Rodenticides
    Answer:(c)

32. My chorrhiza means.....

(a) Symbiosis between fungus and plants
(b) Symbiosis between plant and bacteria
(c) Symbiosis between algae and fungus
(d) Symbiosis between michorrrhiza of fungus of water and bacteria
Answer:(c)

33. Azospirillium and Azotobector for example of.....
(a) Decomposers
(b) Free living N2 fixative
(c) Symbiotic N2 fixative
(d) Pathogenes
Answer:(b)

34. Which pair is odd ?
(a) Yeast - Ethanol
(b) Penicillium – Penicillin
(c) Methenogens - Biogas
(d) Streptococus - Statins
Answer:(d)

35. Which living organism works as bio-fertiliser ?
(a) Azolla (b) Clostridium (c) Azetobactor (d) Rhizobium
Answer:(a)

36. Which micro organism is useful in production of citric acid ?
(a) Azetobactor (b) Penicillium (c) Aspergilus niger (d) Clostridium
Answer:(c)

37. By which process cheese and toddy is obtained ?
(a) Fermentation (b) Distillation (c) Pasteurisation (d) Hydrolysis

Answer:(a)

38. To which BOD is related ?
(a) Microbes and organic matters (b) Organic compound
(c) Microbes (d) None of them
Answer:(b)

39. Which organism is useful to produce Riboflavin ?
(a) Arabia hossipae (b) Saccharhomyces Cervisiae
(c) (a) & (b) both (d) None of them
Answer:(a)

40. Bacillus thuringiensis is useful in....
(a) Bio fertiliser (b) Biometalogical (c) Biotoxic plant (d) Bio product plant
Answer:(c)

41. Bio fertilizer means.....
(a) Crop which shows rapid growth (b) Cow dung and agricultural west
(c) prepared by Anabaena and Nostoc (d) None of them
Answer:(c)

42. Which is useful to control Nematodes in cereal crops ?
(a) Bionematocides (b) Fungicides (c) Weedicides (d) Insecticides
Answer:(c)

43. Which sentence is odd ?
(a) Progesteron is useful as a immuno suppressor
(b) Statins is useful to reduce cholesterol
(c) Streptokinase is useful to prevent blood clotting
(d) Lipase is useful to remove oily stains

Answer:(a)

44. Which micro organism is involved in flocs as well as in mychorrhiza ?
(a) Bacteria (b) Virus (c) Fungus (d) Algae
Answer:(c)

45. Which is used to prevent blood clotting in blood vessels ?
(a) Steroids (b) Cyclosporin-A (c) Streptokinase (d) Statins
Answer:(c)

46. Which is to be used in production of swiss cheese ?
(a) Monascus purpureus (b) Clostridium bacterium
(c) Lacto Bacillus (d) Saccharhomyces cerevisiae
Answer:(b)

47. Which option is related with the utility of lectic acid ?

(a) In fermantation, to prepare pickle (b) useful for preparing curd from milk

(c) To increase the quality of vitamin B12 (d) All the given.

Answer:(d)

48. Which one is useful as a immunosuppresive agent in organ transplant ?

(a) Cyclosprin-C (b) Cyclosporin-L (c) Cyclosporin-A (d) All the given

Answer:(c)

49. IARI means.....

(a) Indian Agriculture Research Institute

(b) International Agrochemical Research Institute

(c) Indian Agrochemical Research Institute

(d) Indian Agriculture Resource Institute

Answer:(a)

50. Which group is true for the Enzymes of micro organism ?

(a) Amylase, Protease, Lipase, Protease.

(b) Glycin, Renin, Lipase, Melic Acid

(c) Lipase, Protease, Lipase, Amylase

(d) Glyconic acid, protease, Lipase, Amylose

Answer:(c)

NEET Model Question Paper

CHAPTER –XI BIOTECHNOLOGY: PRINCIPLES AND PROCESSES

1. Restriction endonuclease
    a) Synthesizes DNA
    b) Cuts the DNA molecule randomly
    c) Cuts the DNA molecule at specific sites
    d) Restricts the synthesis of DNA inside the molecules
2. Gel electrophoresis is used for
    a) Construction of recombinant DNA by joining with cloning vectors
    b) Isolation of DNA molecules
    c) Cutting of DNA into fragments
    d) Separation of DNA fragments according to their size
3. The linking of antibiotic resistance gene with the plasmid vector become possible with
    a) DNA polymerase
    b) Exonucleases
    c) DNA ligase
    d) Endonucleases
4. Polyethylene glycol method is used for
    a) Biodiesel production
    b) Seedless fruit production
    c) Energy production from swage.
    d) Gene transfer without a vector.
5. Which one of the following is used as vector for cloning genes into higher organisms ?
    a) Baculovirus.
    b) Salmonella typhimurium.
    c) Rhizopus nigricans
    d) Retrovirus
6. DNA or RNA segment tagged with a radioactive molecules is called
    a) Vector
    b) Probe
    c) Clone
    d) Plasmid
7. Restriction endonucleases are enzymes which
    a) Make cuts at specific positions within the DNA molecule.
    b) Recognize a specific nucleotide sequence for binding of DNA ligase.
    c) Restrict the actions of the enzyme DNA polymerase.
    d) Remove nucleotides from the ends of the DNA molecules.
8. Stirred-tank bioreactors have been designed for
    a) Addition of preservatives to the products
    b) Purification of the product.
    c) Ensuring anaerobics conditions in the culture vessel.
    d) Availability of oxygen throughout the process.
9. Which of the following are used in gene cloning ?
    a) Nucleoids
    b) Lomasomes
    c) Mesosomes
    d) Plasmids

10. In genetic engineering, a DNA segment (Gene) of interest, is transferred to the host cell through a vector. Consider the following four agents (i-iv) in this regard and select the correct option about which one or more of these can be used as a vector/vectors

    i) Bacterium ii) Plasmid
    iii) Plasmodium iv) Bacteriophage
    a) (i),(ii) & (iv) b) (i) only
    c) (i) & (iii) d) (ii) & (iv)

11. Given below is a simple of a portion of DNA strand giving the base sequence on the opposite strands. What is so specialshown in it ?

    5'____ GAATTC____3'
    3'____CTTAAG____5'

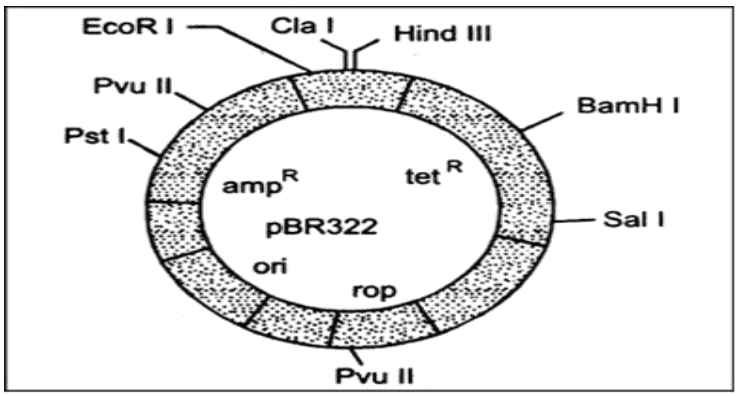
    a) Replication completed
    b) Deletion mutation
    c) Start condon at the 5' end
    d) Plindromic sequence of base pairs.

12. There is a restriction endomolecules called Eco RI. What does "co" part in it stand for ?
    a) Colon
    b) Coelom
    c) Coenzyme
    d) Coli

13. Agarose extracted from sea weeds is used in
    a) Spectrophotometry
    b) Tissue culture
    c) PCR
    d) Gel electrophoresis

14. Which one of the following techniques made it possible to genetically engineer living organisms ?
    a) Recombinant DNA techniques
    b) X-ray diffraction
    c) Heavier isotope labeling
    d) Hybridizatiion

15. The given figure is the diagrammatic representation of the E.Coli vector pBR322. Which one of the given options correctly identifies its certain components(s) ?



    a) Ori-original restriction enzyme
    b) Rop-reduced osmotic pressure
    c) Hin d III, Eco RI selectable markers
    d) Amp^R, tet^R – antibiotic resistance genes

16. PCR and restriction fragment length polymorphism are the methods for
    a) Study of enzymes

b) Genetic transformations
c) DNA sequencing
d) Genetic fingerprints

17. A singe strand of nucleic acid tagged with a radioactive molecules is called
    a) Vector
    b) Selectable marker
    c) Plasmid
    d) Probe
18. Which one of the following is a case of wrong matching ?
    a) Somatic Hybridization- Fusion of two diverse cells
    b) Vector DNA- Site for *t*RNA synthesis
    c) Micropropagation- *in vitro* production of plants in large numbers.
    d) Callus- Unorganised mass of cells produced in tissue culture.
19. Which one is a true statement regarding DNA polymerase used in PCR ?
    a) It is used to ligate introduced DNA in recipients cells.
    b) It serves as a selectable marker
    c) It is isolated from a virus.
    d) It remains active at high temperature.
20. For transformation, micro-particles coated with DNA to be bombarded with gene gun are made up of
    a) Silver or platinum
    b) Platinum or zinc
    c) Silicon or platinum
    d) Gold or trungsten.
21. Biolistics (gene-gun) is suitable
    a) Disarming pathogen vector
    b) Transformation of plant cells
    c) Constructing recombinant DNA by joining with vectors
    d) DNA fingerprinting.
22. In genetic engineering, the antibiotics are used
    a) As selectable markers
    b) To select healthy vectors
    c) As sequence from where replication starts
    d) To keep the culture free of infection.
23. Which one of the following represents a palindromic sequence in DNA ?
    a) 5'-GAATTC-3
       3'-CTTAAG-5'
    b) 5'-CCAATG-3'
       3'-GAATCC-5'
    c) 5'-CATTAG-3'
       3'-GATAAC-5'
    d) 5'-GATACC-3'
       3'-CCTAAG-5'

24. The colonies of recombinant bacteria appear white in contrast to blue colonies of non-recombinant bacteria because of
    a) Insertional inactivation of alpha galactosidese in recombinant bacteria
    b) Inactivation of glycosides enzyme in recombinant bacteria.

c) Non-recombinant bacteria containing beta galactosidase.
d) Insertional inactivation of alpha galactosidase.

25. Which of the following is not correctly matched for the organism and its cell wall degrading enzyme ?
    a) Algae - Methylase
    b) Fungi - Chitinase
    c) Bacteria - Lysozyme
    d) Plant cells - Cellulase
26. DNA fragments generated by the restriction endonucleases in a chemical reaction can be separated by
    a) Electrophoresis
    b) Restriction mapping
    c) Centrifugation
    d) Polymerase chain reaction
27. An analysis of chromosomal DNA using the southern hybridization technique does not use
    a) Electrophoresis
    b) Blotting
    c) Autoradiography
    d) PCR
28. *In vitro* clonal propagation in plants is characterized by
    a) PCR and RAPD
    b) Northern blotting
    c) Electrophoresis and HPLC
    d) Microscopy
29. Which vector can be clone only a small fragment of DNA ?
    a) Bacterial artificial chromosome
    b) Yeast artificial chromosome
    c) Plasmid
    d) Cosmid
30. Commonly used vectors for human genome sequencing are
    a) T- DNA
    b) BAC and YAC
    c) Expression vectors
    d) T/A cloning vectors.
31. Which of the following is a plasmid ?
    a) pBR322
    b) BamH-I
    c) Hind-III
    d) EcoRI
32. Restriction endonucleases are must widely used in recombinant DNA technology. They are obtained from
    a) Bacteriophages
    b) Bacterial cells
    c) Plasmids
    d) All Prokaryotie Cells
33. Viral genome incorporated into host DNA is called

a) Prophase
b) Prophage
c) Bacteriophage
d) None of these

34. Two microbes found to be very useful in genetic engineering are
    a) Crown gall bacterium and Conorhabditis elegens
    b) Escherichia coli to Agrobacterium tumifaciens
    c) Vibria choleraeand a tailed bacteriphage.
    d) Dipococens species and psendomonasap
35. Who disconnected recombinant DNA technoledge ?
    a) Har Gobind Khorana
    b) James Watson & Francis Crick
    c) Stanly Cohen & Herbert Boyer
    d) Watter Sutton
36. Find out the wrong statement ?
    a) Mobile genetic element, Transposons were visualized by Barbara Mc Clintock
    b) Udder cell a somatic cell is used to produce the cloned sheep by nuclear transplantation method.
    c) Dr. Ian Wilmut produced a cloned sheep called Dolley
    d) DNA ligases are used to cleave a DNA molecule.
37. One of the key factors which makes the plasmid the vector in genetic engineering is that
    a) It is resistant to antibiotics
    b) It is resistant to restriction enzymes
    c) Its ability to carry a foreign gene.
    d) Its ability to cause infection in the host.
38. Which of the following is used as a best genetic vector in plants
    a) Bacillus thurienglnesis
    b) Agrobacterium thumifaciens
    c) Psendomonas putida
    d) All of the above
39. The polymerase chain reaction is a technique that
    a) It is used for in vivo replication of DNA
    b) It is used for in vivo synthesis of mRNA
    c) It is used for in vitro synthesis of mRNA
    d) It is used for in vitro replication of specific DNA sequence using thermostable DNA polymerase.
40. The construction of the first recombinant DNA was done by using the native plasmid of
    a) E coli
    b) Salmonella typhimurium
    c) Bacillus thuringiensis
    d) Agrobacterium.
41. Gel electrophoresis is used for
    a) Construction of recombinant DNA by joining with cloning vectors.
    b) Isolation of DNA molecules.
    c) Cutting of DNA is to fragments.
    d) Separation of DNA fragments according to their size.

42. Significant of 'heat shock' method in bacterial transformation is to facilitate ?
    a) Binding of DNA to the cell wall
    b) Update of DNA through membrane transport proteins.
    c) Update of DNA through transient pores in the bacterial cell wall.
    d) Expression of antibiotic resistant gene.
43. Which of the following palindromic bare sequences in DNA can be easily cut at about the middle by some particular restriction enzyme.
    a) 5'CACGTA 3' : 3'CTCAGT 5'
    b) 5'CGTTCG 3' : 3'ATGGTA 5'
    c) 5'GATATC 3' : 3'CTACTA 5'
    d) 5'GAATTC 3' : CTTAAG 5'
44. Agarose extracted from sea weeds in used in
    a) Spectrophotometry
    b) Tissue culture
    c) PCR
    d) Gel electrophoresis
45. Which one of the following technique made it possible to genetically engineered living organisms ?
    a) Recombinant DNA technique
    b) X-ray diffraction
    c) Heavier isotope labelling
    d) Hybridization.
46. There is a restriction endonucleare called EcoRI. What does 'co' part in it stand for ?
    a) Colon
    b) Coelom
    c) Coenzyme
    d) Coli
47. A single stand of nucleic acid tagged tagged with a radioactive molecule is called
    a) Vector
    b) Selectable marker
    c) Plasmid
    d) Probe
48. For transformation, micro particles coated with DNA to be bombared with gene gun are made up of
    a) Silver or Platinum
    b) Platinum or Zine
    c) Silicon or Platinum
    d) Gold or Tungsten
49. Biolistics (Gene-gun) is suitable for
    a) Disarming pathogen vectors.
    b) Transformation of plant cells
    c) Constructing recombinant DNA by joining with vectors
    d) DNA fingerprinting
50. In genetic engineering, the antibiotics are used
    a) As selectable markers
    b) To select healthy vectors
    c) As sequence from where replication starts.

d) To keep the culture free from infection.

Answer Key

1. C
2. D
3. C
4. D
5. D
6. B
7. A
8. D
9. D
10. D
11. D
12. D
13. D
14. A
15. D
16. D
17. D
18. B
19. D
20. D
21. B
22. A
23. A
24. C
25. A
26. A
27. D
28. A
29. C
30. B
31. A
32. B
33. B
34. B
35. C
36. D
37. C
38. B
39. D
40. B
41. D
42. C
43. D
44. D
45. A
46. D
47. D
48. D
49. B
50. A

BIOTECTNOLOGY AND ITS APPLICATIONS.
NEET QUESTIONS

1. Insect resistant transgenic cotton has been produced by inserting a piece of DNA from

a. An insect
b. A bacterium
c. A wild relative of cotton
c. A virus

2. Hybridoma technology has been successfully used in

a. Production of somatic hybrids
b. Synthesis of monoclonal antibiotics
c. Synthesis of haemoglobin
d.Pproduction of alcohol in bulk

3. During “gene cloning” which is called as “gene taxi”?

a. Vaccine
b. Plasmid
c. Bacterium
d. Protozoa

4. Name the drug used in cancer treatment produced by using biotechnology

a. Terramycin
b. HGH
c. . Interferon
d. TSH

5. Cultivation of Bt cotton has been much in the news. The prefix Bt means

a. ”Barium treated”cotton seeds
b. ”Bigger thread” variety of cotton with better tensile strength
c. Produced by “Biotechnology”using restriction enzymes and ligases
d. Carrying an endotoxin gene from Bacillus thrungienesis

6. The first antibiotic was discovered by……

a. Louis Pasteur
b. R.Koch
c. W.Fleming
d. A.Fleming

7. In transgenics, expression of transgene in target tissue is determined by

a. Transgene

b. Promoter

c. Reporter

d. Enhancer

8. Terminator gene

a. Help in terminating flowering

b. Help in terminating seed germination

c. Used in hybridization

d. None of these

9. First biochemical to be produced commercially by microbial cloning and genetic engineering

a. Human insulin

b. Penicillin

c. Interferons

d. Fertility factor

10. Golden rice is a transgenic crop of the future with the following improved trail

a. Insect resistance

b. High lysine content

c. High protein content

d. High vitamin-A content

11. *Bacillus thuringiensis* (Bt) strains have been used for designing novel

a. Biofertilizers

b. Bio-metaluurgical techniques

c. Bio-mineralization process

d. Bio-insecticidal plants

12. Which of the following is a correct statement

a. ”Bt” in “Bt-cotton” indicates that it is a genetically modified organisms produced through biotechnology

b. Somatic hybridization involves fusion of two complete plant cells carrying desired genes

c. The anticoagulant hirudin is being produced from transgenic Brassica napus seed

d. ”Flavr Savr”variety of tomato has enhanced the production of ethylene which improves its tastes its taste

13. Which bacteria is used as biopesticide first on the commercial scale in the world?

a. Bacillus thuringiensis

b. E.coli

c. Pseudomonas aeruginosa

d. Agrobacterium tumefaciens

14. Gene recombinant technology is used for

a. Vector less gene transfer into target cell

b. Vector based gene transfer into target cell

c. Direct transfer of DNA protein complex

d. Liposome base direct gene transfer into target cell

15. Transfer of DNA bands from an agrose gel to a nitrocellulose or nylon membrane is referred to as

a. Western transfer

b. Northern transfer

c. Eastern transfer

d. Gene transfer

e. Southern transfer

16. Golden rice is a promising transgenic crop. When released for cultivation, it will help in

a. Producing a petrol-like fuel from rice

b. Alleviation of vitamin A

c. Pest resistance

d. Herbicide tolerance

17. A genetically engineered micro-organism used successfully in bioremediation of oil spills is a species of

a. Trichoderma

b. Xanthomonas

c. Bacillus

d. Pseudomonas

18. Blindness is prevented by use of which crop in poor countries?

a. Golden rice

b. Wheat

c. Gram

d. Pea

19. Human insulin is being commercially produced from a transgenic species of

a. Rhizobium

b. Saccharomyces

c. Escherichia

d. mycobacterium

20. A transgenic food crop which may help in solving the problem of night blindness in developing countries is

a. Bt soybean

b. Golden rice

c. Flavrsavrtomatoes

d. Starlink maize

21. Main objective of production/use of herbicide resistant GM crops is to

a. Encourage eco-friendly herbicides

b. Reduce herbicide accumulation in food articles for healt h safety

c. Eliminate weeds from the field without the use of manual labour

d. Eliminate weeds from the field without the use of herbicide

22. Genetically engineered bacteria are being employed for production of

a. Thyroxine

b. Human insulin

c. Cortisol

d. Epinephrine

23. Isolation of Bt gene from bacterium (*Bacillus thuringiensis)* was taken up in the year

a. 1977

b. 1980

c. 1997

d. 1990

24. Which one of the following is commonly used in transfer of foreign DNA into crop plants?

a. Meloidogyne incognita

b. Agrobacterium tumefaciens

c. Pencillium expansum

d. Trichoderma harzianum

25. What is true about Bt toxin?

a. Bt toxin exists as active toxin in the *Bacillius.*

b. The activated toxin enters the ovaries of the pest to sterlise it and thus prevents its multiplication.

c. The concerned Bacillus has anti toxin

d. The inactive prototoxin gets converted into active form in the insect gut

26. Transgenic plants are the ones

a. Generated by introducing foreign DNA into a cell and regenerating a plant from the cell

b. Produced after protoplast fusion in artificial medium

c. Grown in artificial medium after hybridization in the field.

d. Produced by a somatic embryo in artificial medium

27. The bacteria *Bacillus thuringiensis* is widely used in contemporary biology as

a. Insecticide

b. Agent for production of diary products

c. Source of industrial enzyme

d. Indicator of water pollution

28. Golden rice is

a. A variety of rice grown along the yellow river in china

b. Long stored rice having yellow colour tint

c. A transgenic rice having gene for β-carotene

d. Wild variety of rice with yellow coloured grains

29. In RNAi,genes are silenced using

a. ss DNA

b. ds DNA

c. ds RNA

e. ss RNA

30. The first clinical gene therapy was done for the treatment of

a. AIDS

b. Cancer

c. Cystic fibrosis

d. SCID

31. ADA is an enzyme which is deficient in a genetic disorder SCID. What is the full form of ADA?

a. Adenosine deoxyaminase

b. Adenosine deaminase

c. Aspartate deaminase

d. Arginine deaminase

32. Silencing of a gene could be achieved through the use of

a. Short interfering RNA(RNAi)
b. Antisense RNA
c. By both
c. None of the above

33. Silencing of m-RNA has been used in producing transgenic plants resistant to

a. Bollworms
b. Nematodes
c. White rusts
d. Bacterial blights

34. The first clinical gene therapy was given for treating

a. Diabetes mellitus
b. Chicken pox
c. Rheumatoid arthritis
d. Adenosine deaminase deficiency

35. Tobacco plants resistant to a nematode have been developed by the introduction of DNA that produces(in the host cell)

a. Both sense and anti-sense RNA
b. A particular hormone
c. An antifeedant
d. A toxin protein

36. Amplification of gene of interest by using DNA polymerase may go upto

a. 0.1 million times
b. 1.0 million times
c. 1.0 billion times
d. 1.0 trillion times

37. Which of the following Bt crops is being grown in India by the farmers?

a. Cotton
b. Brinjal
c. Soybean
d. Maize

38. The first human hormone produced by recombinant DNA technology is

a. Insulin
b. Estrogen
c. Thyroxin
d. Progesterone

39. An analysis of chromosomal DNA using the hybridization technique does not use

a. Electrophoresis
b. Blotting

c. Autoradiography d. PCR

40. Bt cotton is not:
a. A GM plant
b. Insect resistant
c. A bacterial gene expressing system
d. Resistant to all pesticides

41. C-peptide of human insulin is:
a. A part of mature insulin molecule
b. Responsible for formation of disulphide bridges
c Removed during maturation of pro-insulin to insulind. Responsible for its biological activity.

42. GEAC stands for:
a. Genome Engineering Action Committee
b. Ground Environment Action Committee
c. Genetic Engineering Approval Committee
d. Genetic and Environment Approval committee

43. α -1 antitrypsin is:
a. An antacid
b. An enzyme
c. Used to treat arthritis
d. Used to treat emphysema

44. The site of production of ADA in the body is:
a. Bone marrow
b. Lymphocytes
c. Blood plasma
d. Monocytes

45.A protoxin is:
a. A primitive toxin
b. A denatured toxin
c. Toxin produced by protozoa
d. Inactive toxin

46. The trigger for activation of toxin of Bacillus thuringiensis is:
a. Acidic pH of stomach
b. High temperature

c. Alkaline pH of gut
d. Mechanical action in the insect gut

47. In RNAi, genes are silenced using:
a. ss DNA
b. ds DNA
c. ds RNA
d. ss RNA

48.'Molecular scissor' used in genetic engineering is
a. Restriction endonuclease
b. DNA polymerase
c. DNA ligase
d. Helicase

49. Plants are genetically engineered with novel genes by
a.Embryo rescue technique
b. Recombination breeding
c. Protoplast fusion
d. Recombinant DNA technology

50. Maximum application of animal culture technology today is in the production
a) Insulin
b) Interferons
c) Edible proteins
d) Vaccines.

****

ANSWERS KEYS

1. b. A bacterium,
2. b. Synthesis of monoclonal antibiotics,
3. b. Plasmid,
4. c. . Interferon
5. d. Carrying an endotoxin gene from *Bacillus* thrungienesis,
6. d. A.Fleming,
7. b. Promoter,
8. b. Help in terminating seed germination
9. a. Human insulin
10. d. High vitamin-A content ,
11. d. Bio-insecticidal plants,
12. c. The anticoagulant hirudin is being produced from transgenic *Brassica napus* seed,
13. a. Bacillus thuringiensis
14. b. Vector based gene transfer into target cell
15. e. Southern transfer,
16. b. Alleviation of vitamin A,
17. d. Pseudomonas
18. a. Golden rice,
19. c. Escherichia
20 b. Golden rice,
21. b. Reduce herbicide accumulation in food articles for health safety.
22. a. Thyroxine,
23. b. 1980,
24. b. Agrobacterium tumefaciens
25. d. The inactive prototoxin gets converted into active form in the insect gut ,
26. a. Generated by introducing foreign DNA into a cell and regenerating a plant from the cell.
27. a. Insecticide ,
28. c. A transgenic rice having gene for β-carotene,
29. c. ds RNA ,
30. b. Adenosine deaminase,
31. b. Adenosine deaminase
,32. c. By both
33. b. Nematodes,
34. a. Both sense and anti-sense RNA,
36. c. 1.0 billion times,
37. a. Cotton
38. a. Insulin
39. d. PCR
40. d. resistant to all pesticide
41. c Removed during maturation of pro-insulin to insulin
42. c. Genetic Engineering Approval Committee
43. d. Used to treat emphysema,
44 b. Lymphocytes
45 d. Inactive toxin,
46 c. Alkaline pH of gut,
47 c. ds RNA
48. a. Restriction endonuclease
49. d. Recombinant DNA techno log
50. d) Vaccines.

,

NEET Biology MCQ
Chapter-13 Organism and population

1. What is true for the following statements ?
Statement X : Migration of birds is influenced by light.
Statement Y : Reproduction of birds is influenced by light.
Statement Z : In all birds gonads are activated due to increase in intensity of light during summer.

	X	Y	Z
(a)	True	False	False
(b)	False	True	False
(c)	True	True	True
(d)	True	True	False

2. What is true for the given statements ?
Statement X : Birds and Mammals obtain greater body size in cold region than in warm regions.
Statement Y : Birds and Mammals are Homeothermic (warm blooded)animals.
Statement Z : Reptiles are smaller in cold region.

(a)	True	False	True
(b)	True	True	False
(c)	True	True	True
(d)	False	True	True

3. "Spiny lizard" absorbs water from the atmosphere which is appropriate similar functional option for the statement ?
(a) Tongue of Human (b) Hygroscpic roots of orchid
(c) Roots of plants (d) None of these

4. What is true for the following statements ?
Statement X : Marine fishes have chlorine secretory cells. while riverine fishes have chlorine cells.
Statement Y : Compared to marine water, fluid present in fish is hypotonic while reverine water is hypertonic compared to fluid present in fish.

X	Y	X	Y

(A) True True (C) True False

(B) False False (D) False True

5. Which animal is capable of obtaining water by oxidation of lipid.

(a) Rat (b) Earthworm (c) Mole (d) Kangaroo rat

6 Which is the example of intraspecific competition for food ?

(a) Barnacle on rocks of the submerged water

(b) Two female dogs and two male dogs

(c) Various types of lichens

(d) Paramaecium caudatuns and P.aurelia in laboratory.

7 Name the animals with freshwater habit in which

(i) endosmosis is possible

(ii) Excess water in removed by green glands

(iii) Greenglands removes water in the from of urine

(a) Fresh water fishes (b) ophiocephalus

(c) Crustacean astucus (d) None of these

8. In snakes realised (actual) natality is less than potential natality; because.....

(a) all the eggs are not incubated

(b) enviornmental boomrang (resistance)

(c) Though eggs are incubated they donot reach upto adult stage.

(d) All of these.

9. Indentify me " My functioning is like an orchid.

(a) Protopterus (b) Spiny lizard

(c) uromastrix (d) Spiny platypus

10. Crustacian Astacus = Green land

Marine turtle

what is 'X' accroding to the information given ?

(a) Salt gland (b) Kidney

(c) None of these (d) chlorine secretory cells

11. Which of the following is correct statement ?

(a) uromatrix lizard stores water in the intestine

(b) Camel stores water in its stomach

(c) Anabus develops accesary respiratory organs to respire in water.

(d) Kangaroo rat undegeoes hibernation.

12. Parasitic animal which is part of bio-geo community and included as zoo planktons and mesofauna of tenestrial ecosystem is ....

(a) Moles (b) mites (c) Earthworms (d) leech

13. From the given option which is the appropriate for ecto parasite animal Ascaris, Tapeworm, plas modium, mites

(a) phytoplanktons (b) mesofauna

(c) macrofauna (d) phytoplanktons and mesofauna.

14. Which living organism is seen in the hot water spring having temperature more than $100^{??}C$..

(a) Methanogens (b) Thermoacidophils

(c) Helophytes (d) spirokit

15. Find out population density.

Since last 4 years number of lions in a squre forest is 500 (length of forest =10 km)

(a) 1.25 lions/year . k $meter^2$

(b) 12.5 lions/ k $meter^2$ - year

(c) 1.025 lions/ cm^2 month

(d) (d) 12.5 lions/ k $meter^2$ - month

16. Average human population in a certain time area is 5000 in which 1111 children are produced during an years, find out the birth rate ?

(a) 0.1111 (b) 0.3333 (c) 0.2222 (d) 0.4444

17. In birthrate and deathrate is equal, then what will be the Vital Index ?

(a) = 1 (b) = 100 (c) >100 (d) <100

18. Which option is correct for the given statement .

Statement X : Density dependent factors are intrinsic Reason R : They are generated in population only

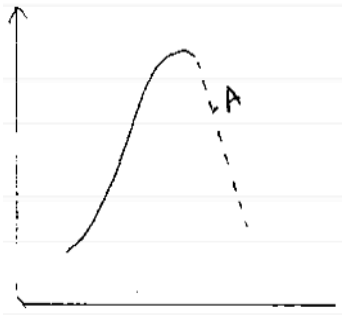
(a) Both statement are true

(b) Both statement are false

(c) X is true, y is false

(d) X is false, Y is true

19. In a population of frog 'J' type of population growth curve is seen than which information from the given graph can be true for " point A"



(i) Vital Index < 100

(ii) Birth rate < death rate

(iii) Birht rate > death rate

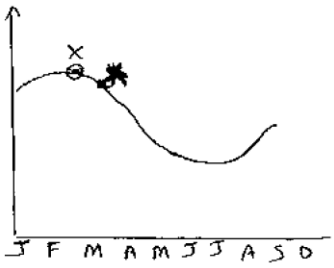
(a) I

(b) II, III

(c) I, III

(d) I, II

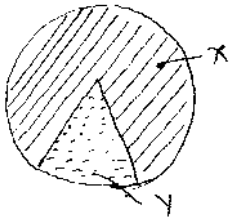
20. The given graph shows seasonal changes in the population of Birds of Gujarat in the year 2002. In the given graph what is true for point X ?



(a) Vital Index <100
(b) Vital Index >100
(c) Vital Index =100
(d) None of these

21. Producers --->Decomposers ---->'X', then what will be 'X' ?
(a) Nostoc
(b) Fungi
(c) Both of these
(d) None of these

22 In given chart, what is the problem seen in living organism staying in 'X' denoted area ?



(a) endosmosis
(b) exosmsis
(c) a & b both
(d) geting water and maintaing it.

23. What is correct for the given statement ?
Statement P : Environmental study is linked with ecology
Statement Q : Ecology is included in environmental study.
(a) Both statement are true
(b) Both statement are wrong
(c) P is right and Q is wrong
(d) P is wrong and Q is right

24. What is the vital Index, if Birht rate is 0 and Death rate = 5 ?
(a) 0 (b) 100
(c) 1 (d) None of these

25. If the Birth rate is 10 and death rate is 0 then what is VITAL INDEX ?
(a) 0 (b) 100 (c) ??Infinative (d) 1

26. Which is appropriate for the following statement ?
Statement X : Pacific salmon fish reproduces only once in its life time.
Statement Y : In a reproductive season it lays 2,80,000,000 eggs.

	X	Y
(a)	True	True
(b)	False	False

(c) True False

(d) False True

27. Mycobiont Supplies X to phycobiont and phycobiont supplies Y to mycobiont, then what is true for X and Y ?

(a) X : Mineral element ; Y : Habitat

(b) X : organic nutrients ; Y : Inorganic Nutrient

(c) X : Habitat Y : protection

(d) X : Minerals Y : organic nutrients

28. Aplant formed by the combination of algae and fungi is a pioneer of which type of succession ?

(a) Xerosere (b) Hydrosere (c) Mesosere (d) None of these

29. Y ?? X having interspecific relations in which animal which is not affected is X shows excretory orgndds which are also seen in Y and is Z located in its gills then.... what are X, Y, Z - ?

(a) X = Termite (b) X = shank Y

= flagelates Y = Tortoise

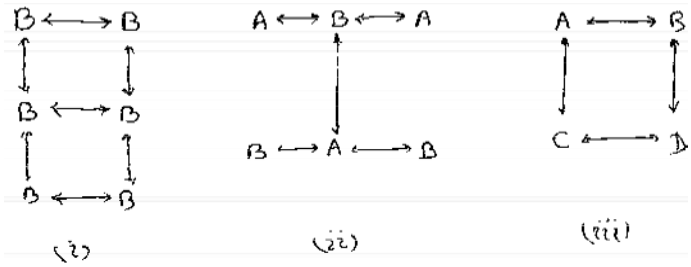
Z = Tentacles Z = Chlorine cell

(c) X = shank (d) All of these (above)

Y = fish

Z = chlorine secreting cells

30. what does the given graph shows



(a) (i) Community Ecology (b) (i) Population Ecology

(ii) Population Ecology (ii) Community Ecology

(iii) Population Ecology (iii) Ecosystem Eclogy

(c) (i) Population Ecology (d) None of these

(ii) Community Ecology

(iii) Community Ecology

31. In a population of salmon fish, potential Natality is 10,000 while realised mortality is 200, then the Vitlal Index =

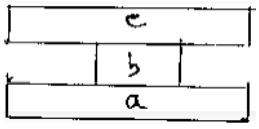
(a) 50, (b) less then 50 (c) mor then 50 (d) None of these

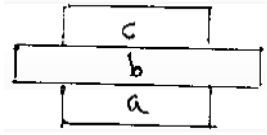
32. Which of the following is not possible in ecosystem where microflora is absent

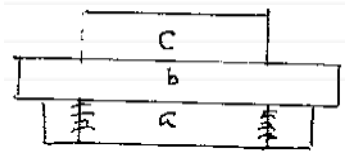
(a) Photosynthesis (b) Decomposition (c) Assimillation (d) None of these

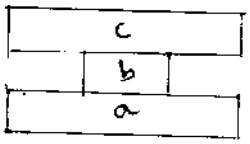
(b)

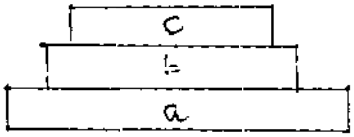
33. If marine fish is kept in fresh water, will it survive
    (a) Yes, If chlorine cells are placed in its kidney
    (b) Yes, If chlorine cells are placed in its green gland
    (c) No, Because it can not adapt
    (d) No, they can not survive but of yongones hatching out of their eggs can survive
34. What is true for both the organism showing interspecific compitition ?
    (a) Both are benefited
    (b) more or less harmful effect to both
    (c) one is benefited where as other is at loss
    (d) None of these
35. If at "t" time population density is N, then what is the equation for the population density at (t+1) time ?
    (a) N (t+1) = Nt - [CD+E] - [B+I)]
    (b) N (t+1) = Nt+B+I-D-E
    (c) N (t+1) = Nt+(B+I)-(D+ E)]
    (d) All of these
36. Write appropriate option for antibiosis
    (a) Penicillium fungi and certan gram +ve bacteria
    (b) Penicillium fungi and certan gram -ve bacteria
    (c) Spirocheate and fermicutes
    (d) None of these
37. The graph of age related distribution in a village is as following If during 1 year potential mortality = relized mortality, then which type of graph is seen after 1 year ?



(a) 

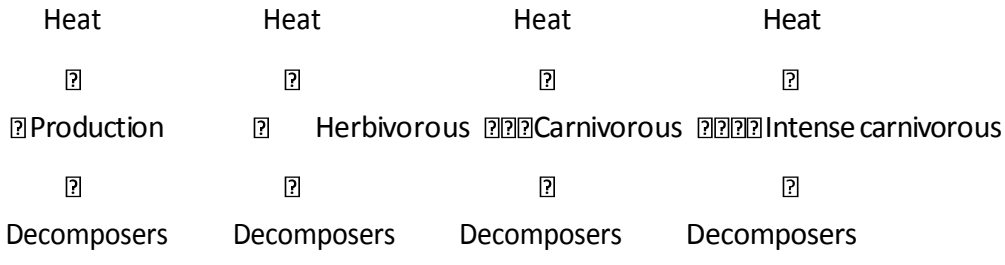
(b) 

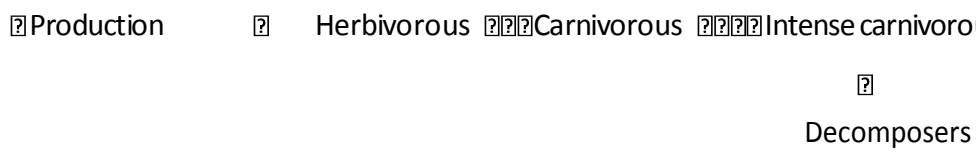
(c) 

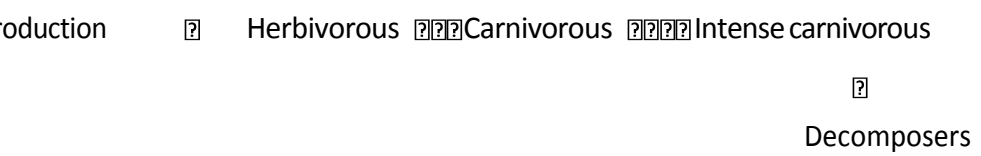
(d) 

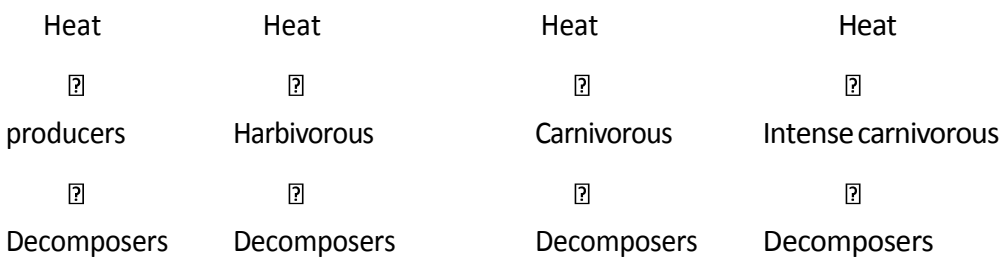
38. What is true with the respect to energy flow ?

Figure

(a)


(b)


(c)


(d)


39. In which subdivision of aquatic ecosystem thermal stratification in seen ?

(a) marine (b) deep fresh water habitat

(c) marine and fresh water area (d) None of these

40. In which of the following aquatic ecosystems habitat fluid (liquid) is very concetrated compared to body fluid ?

(a) Marine (b) Esturine (c) Riverine (d) pond.

41. Which of the following is true with reference to temperature diffrence ?

(a) 1. Terrestrial Habital > Aquatic Habitat
2. Sea < Deep fresh water lakes

(b) 1. Aquatic Habitat > Terrestrial Habitat
2. Sea < Deep fresh water lake

(c) 1. Terrestrial Habital = Aquatic Habitat
2. Sea < Deep fresh water lake

(d) 1. Terrestrial Habital < Aquatic Habital
2. Sea = Deep fresh water lake

42. Water holding capacity of land depends on ?

(a) Soil composition (b) Grain size

(c) Aggregation of grain (d) All of these

43. What true for the following statements ?

Statement X : During evolution many species, by continous development of their internal environment, made their physiologycal processes more efficient.

Statement Y : Orgenisms show adaptations in order to survive in the enviornment

	X	Y		X	Y
(A)	True	True	(C)	True	False
(B)	False	True	(D)	False	False

44. In which of the following organism water is stored in its transformed from and not water as such ?

(a) camel (b) Uromatrix

(c) Spiny tailed lizard (d) rat

45. Which path is followed by plants as a part of adaptation in an ecosystem where Kangaroo rat is living ?

(a) C3 Path (b) C4 Path

(c) CAM Path (d) TCA Path

46. Which is true for the following statements ?

Statement X : Cursorial animals have spindle shaped body

Statement Y : Because of narrow head they can prepare burrow properly

	X	Y
(a)	True	False
(b)	False	True
(c)	False	False
(d)	True	True

47. What is the temperature at which archeobacteria can survive ?

(a) 90□□C (b) 100□□C (c) 110□□C (d) All of these

48. To whom can we correlate the young one developing from the eggs of Daphnis which are laid at normal room temperature ?

(i) queen bee (ii) worker bee (iii) male (drone) bee

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

49. Which is appropriate option if we take 'T' for correct statement and 'F' for wrong statement ?

(i) Energy pyramids are always upright.

(ii) Detritus food chain begins with dead organic matter

(iii) C4 path is the only path seen in xerophytes

(iv) Biodiversity is less in equatorial region because of more sunlight

(v) At normal Temperature daphnis lays parthenogenetic eggs. which develops into male(♂)

(a) TFTTF (b) TFFFF

(c) FFFTF (d) TFTFF

50. Increase and decrease in a population in one of the places in USA, because of sandy cyclone is given below.

Which type of graph is possible for total no. of individuals in a population v/s month ?

Month	Birth rate	Imigration	Death	Emigration
July	40	100	30	20
August	100	200	50	45
September	200	800	100	10
October	100	--	5000	3000

(a) S. Shaped (c) irrupative

(b) J. Shaped (d) None of these

51. Hygroscopic skin is seen in.....

(a) Kangaroo rat (b) Uromatrix

(c) Spiny tailed lizard (d) Camel

52. What is true for marine animals ?

(a) Because of exosmosis they drink sea water

(b) As they drink sea water exosmosis occurs

(c) Because of exosmosis body fluid become hypotonic, so they drink sea water

(d) None of these

53. In order to find out VITAL INDEX in Rampur Village, following information was gathered

Death Rate = 1/x Birth Rate = z

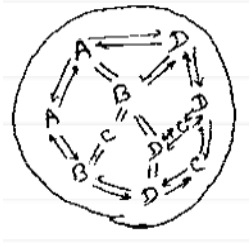
Average population = 1/y

What is the Vital Index ?

(a) xyz X 100 (b) z/xy =100

(c) xy/z X 100 (d) 100/xyz

54. What is the true for the community ecology diagram ?



(a) Involvement of 4 individuls of a population

(b) Involvement of 4 population of a species

(c) Involvement of 4 species of a community

(d) Involvement of 4 speces of 4 ecosystem

55. Match the column I with column II

Column I	Column II
(1) Astacus	(p) Hydrophiic skin
(2) Marine turtle	(q) green gland
(3) Spiny lizard	(r) water storage in intestine
(4) Uromatrix	(s) salt glands

(a) (1-q), (2-s), (3-p) (4-r) (b) (1-s), (2-q), (3-p) (4-r)

(c) (1-s), (2-p), (3-q) (4-r) (d) (1-p), (2-q), (3-s) (4-r)

56. Which of the following is incorrect if 'O' sign is used for benificial and '+' sign for harmful ?

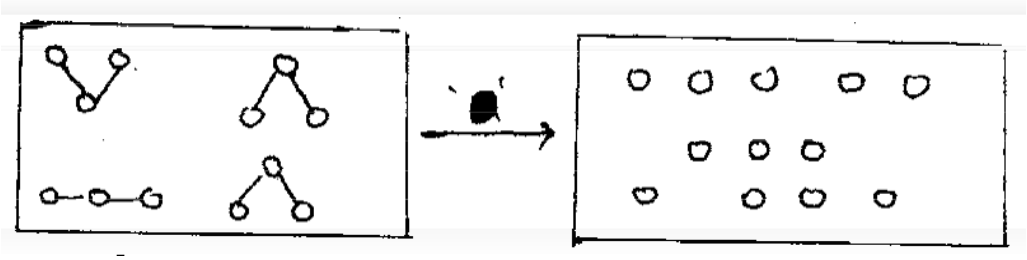
(a) Penicillium <--> Gram +ve bacteria ; Penicillium: '+'

(b) Rhizobium <---> palnt - leguminosae family : Both 'O'

(c) Tiger <--> Rabbit ; Tiger : 'O'

(d) Shank fish <---> Suckerfish ; Suckerfish ; 'O'

57. What will happen if 'X' which is related to this reaction is absent ?



(a) Deconposition, essential process like death, will stop

(b) Damage to ecosystem

(c) Begining of the food chain is not possible

(d) All the statements given are correct

58. In the section of lichen which layer is seen just below " upper cortex"

(a) Medulla

(b) Algal layer

(c) lowercortex

(d) All of these

59. What is true for the given statements ?

Statement X : Protopterus aestivate during winter to overcome dry period Statement Y : The process of aestivation in protopterus is to overcome unfavourable condition

(a) Both statements are true

(b) X-Correct Y- wrong

(c) Both statements are wrong

(d) X- wrong Y- correct

60. What is true for the given statement ?

Statement X : Most of the animals and almost all the plants cannot keep up their interna l enviornment constant

Statement Y : process of osmoregulation in plants is an example of this

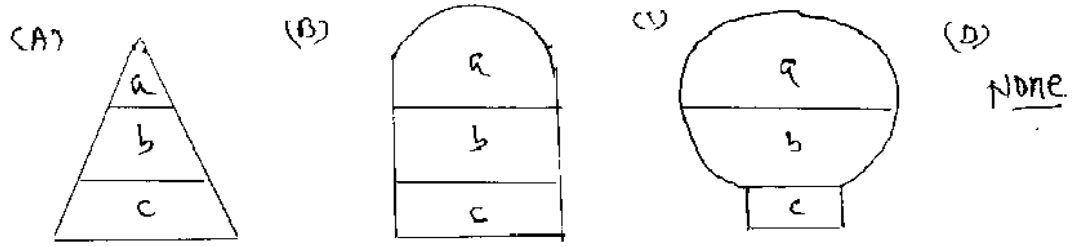
(a) Both statements are true

(b) X - correct, Y- wrong

(c) Both statements are wrong

(d) X- wrong, Y- correct

61. which type of pyramid is true for the population having more number of pre reproductive and re productive age group ?



a = post reproductive age group

b = reproductive age group

c = pre reproductive age group

62. X= Arthropods, Y = Mollusca, z = Coelenterates :-If the X by using Y, lives benifical life with z, then which of the following is correct example ?

(a) X = cockroach Y = pearl oyester Z = Hydra

(b) X = Millipede Y = pila Z = jellyfish

(c) X = Hermit crab Y = Gastropoda Z = sea anenone

(d) All of these

63. From the given option find out the correct pair ?

(a) Mesofauna - Earthworm

(b) Macrofauna - spider

(c) Microfauna - fungi

(d) None of these

64. Mathc column I with column II

Column - I	**Column - II**
1. Mutualism	(p) Barnacles
2. Competition	(q) Tiger
3. Predation	(r) Mites
4. Parasitism	(s) Sea anemone

(a) (1-s), (2-r), (3-p) (4-q) (b) (1-r), (2-s), (3-q) (4-p)

(c) (1-s), (2-p), (3-q) (4-r) (d) (1-q), (2-r), (3-s) (4-p)

65. Give correct option for the given true and false statements

(i) Some insects, birds and mammals living in warm and dry climate have more darker black pigments than the races of same species living in cold and humid climate.

(ii) Tempreture variation is much lesser in aquatic habitat compared to terrestrial habitat

(iii) In deep fresh water lakes, there is gradual incrase in tempreture from surface to the bottem

(iv) In an aquatic habitat production increases with insing depth. (T =True, F = False)

(a) FFFF (b) TFTF (c) TTFT (d) FTFT

66. 'X' is an example of Mutualism and 'Y' is an example of succession then which is the correct realtionship ?

(a) X = Hermit Grab Y = Gastropod

(b) X= Sea anemore Y = mesosere Succession

(c) X = Lichen Y = Xerosere

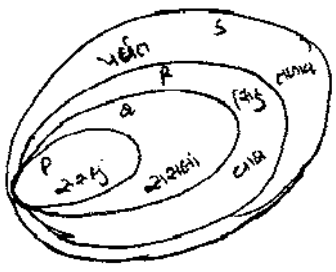
(d) X= Lichen Y= Hydrosere

67. At 't' time, population density is 'N' and at t+1 time population density is Nt+1/If Nt+1 - Nt then find out the correct option

(a) B-D +I-E ≥0 (b) B-D+I-E = 0

(c) B+D-I+E +0 (d) B+D-I+E ≥0

68. Find out correct option P,Q,R,S, from the given diagram



P Q R S

(a) population organism Ecosystem Biotic community

(b) Organism population Biotic community Ecosystem

(c) Ecosystem Biotic community population Species

(d) Biotic community Ecosystem Species population

69. Which of the following is not included as the climax community of general processof succession ?

(a) Sedge-meadow stage (b) phytoplanktones

(c) Forest (d) Grassland

70. How mandy sq. km. area of biosphere is occupied by marine habitat. ?

(a) 3,62,000,000 (b) 36 crore 20 lacs

(c) 36,20 Million (d) all of these

71. Whats percentage of earth is occupied by marine habitat ?

(1) 71% (2) 4 % (3) 67% (4) 29%

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

72. What is the composition of soil with high waterlogging capicity ?

(a) Sandy soil (b) Black soil (loan soil)

(c) Rocky soil (d) Any one of these

73. Recently a village was badly affected by jaundice and Dengue,which of the following will decrease due to this ?

(a) No. of persons (b) area (c) Birthrate (d) Death rate

74. Which is related to the given statement ?

In the begining of summer crow and koel lays eggs.

(a) As the light intensity decerease reproductive organs become active

(b) In some Birds increase or decrease in intensity of hight- makers reproductive organs active or inactive respecctivity

(c) with increase in temperture, gonads become active

(d) None of these

75. Population of CBM Village year wise .....

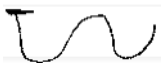
2000 -----> 1000

2005 -----> 400

2010 -----> 600

2012 -----> 800

what will be the appropri/ate graph for this ?

(a)  (b) Irruptive

(c) 'S' shaped (d) J shaped

76. What is correct for the given statement ?

Statement X : Ascaris are permanent parasites

Statement Y : Ascaris lives inside the host's body

(a) Both X&Y are correct (c) X is wrong Y is true

(b) Both x & Y are wrong (d) X is correct & Y is true

77. Depending on the study of bird population in diffrent areas of North Gujarat for last 10 years (2000 -2010) In which month population of bird is least ?

(a) February (b) September (c) April (d) October

78. Which is the correct option for the given table ?write 'T' if the given ecample is correct and 'F' for wrong example

Information	Example
Breed only once	Bamboo
Breeds many time	Birds like pigeon, Mammals
Small sized but many offsprings	Pray Birds
less in number but big size offsprings	Only deep marine shishes

(a) TFTF(b) TTFF (c) FFTT (d) TFFF

79. Biological control as pest control in agriculture is an example of .....

(a) Predation (b) Competition (c) Emigration (d) diseases

80. The turtle of Galapagus island and the goats living there both were eating tender grass, state the relationship.

(a) Interspecific competition (b) Emigration

(c) predation (d) None of these

81. carrying capicity of a population is determind by (BHU 2001)

(a) Birth rate (b) Death rate

(c) limiting resources (d) Reproductive ability...

82. Biotic community means.... [CBSC, PMT - 2001]

(a) Group of Birds

(b) Group of species

(c) Group of interrelated population

(d) Groups of interrelated ecosystem

83. What is true for the members of same species [CBSC, PMT - 2002]

(a) Capicity of inter breeding

(b) shows same ecological niche

(c) show diffrent type of ecological niche

(d) They have diffrent Habitat

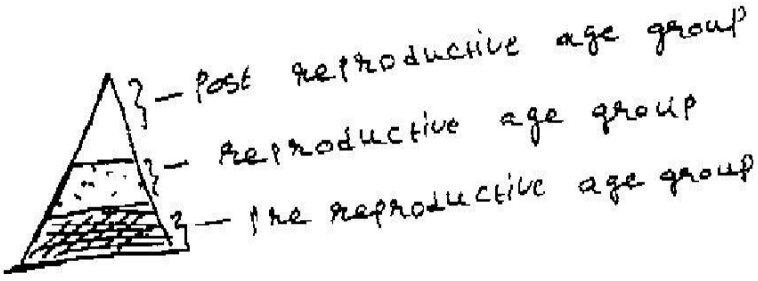
ANSWER KEY

1 (a)	26 (c)	51(c)	76 (a)
2 (d)	27 (d)	52 (a)	77 (b)
3 (b)	28 (a)	53 (a)	78 (b)
4 (c)	29 (c)	54 (c)	79 (a)
5 (d)	30 (c)	55 (a)	80 (a)
6 (b)	31 (b)	56 (a)	81 (c)
7 (c)	32 (d)	57 (d)	82(c)
8 (d)	33 (c)	58 (d)	83 (a)
9 (b)	34 (b)	59 (d)	
10 (b)	35 (d)	60 (a)	
11 (c)	36 (a)	61 (b)	
12 (b)	37 (d)	62 (c)	
13 (c)	38 (d)	63 (c)	
14 (b)	39 (b)	64 (c)	
15 (a)	40 (a)	65 (d)	
16 (c)	41(a)	66 (c)	
17 (b)	42 (d)	67 (b)	
18 (a)	43 (a)	68 (b)	
19 (d)	44 (a)	69 (b)	
20 (d)	45 (c)	70 (d)	
21 (d)	46 (d)	71 (d)	
22 (c)	47 (d)	72 (b)	
23 (a)	48 (a)	73 (a)	
24 (a)	49 (b)	74 (c)	
25(c)	50 (b)	75 (b)	

NEET Biology MCQ

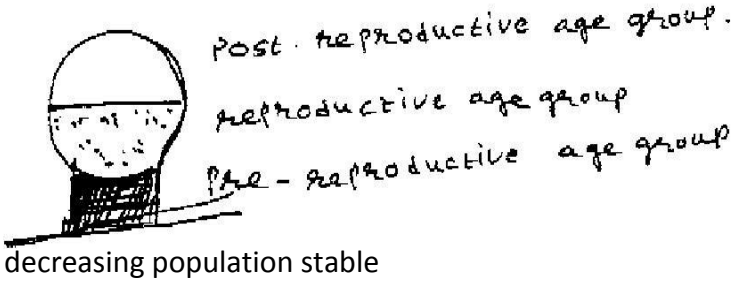
Chapter-14. Ecosystem

1. What does following diagram indicate ?



(A) Declining Population
(B) Constant declining Population
(C) Increasing Population
(D) Stable Population

2. Which option is not correct for the given diagram ?

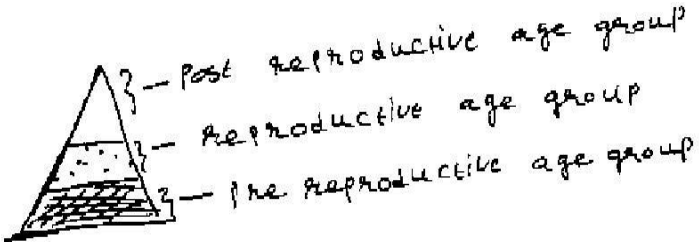


(A) It indicate decreasing population stable
(B) It indicate stable population
(C) The post-population age group people are more in number
(D) The death rate is higher than birth rate

3. A Snake feed on frog, the hawk feed on this snake. What is the place of snake in foodchain?

(A) producer
(B) primary consumer
(C) secondary consumer
(D) Tertiary consumer

4. What is correct for the given diagram?



(A) Pre- re productive group people are more in number
(B) Post-re productive group people are more in number
(C)Post-re productive group people are more less
(D)In it-pre productive and post reproductive age- group are placed respectively.

5. Orchid living on the tree is an example of .....?

(A)Parasitism (B)Predation

(C)Commensalism (D) Mutualism

6. Population of which of the following will be highest in the foodchain?

(A) Decomposer (B)Primary Producer

(C)Photosynthetic organism (D)Secondary consumers

7. Who is food componant of the grazing food chain?

(A)Consumer (C)Decomposer

(D)Photosynthetic living organism (D)Photosynthetic consumers

8. System resulting from interaction of all the known living factors and populaton of all the species of a unit area is...

(A)Ecology (B)Genetics

(C)Science of plants and animal (D)Ecosystem

9. In which of the following plants are included in any food chain?

(A)Primary Producer (C)primary comsumer

(B)Primary predator& producer (D) Primary decomposar

10. Which of the following is the correct statement for food chain?

(A) Every chain formed by nutritional relations , is used to understand energy flow.

(B) Energy component of the food chain forms trophic level.

(C) Inter- relation amongest different food chain froms food web.

(D) All of the given

11. Which of the following uses maximum energy?

(A) Primary consumer (B) Secondary consumer

(C) Decomposer (D) Primary Producers

12. Through, which of the following, energy enters in an ecosystem?

(A) Herbivores (B) Producer

(C) Decomposer (D) Primary producers

13. Why is algae placed in first place of food chain ?

(A) Algae is first to synthesize food.

(B) Algae is first to consume food.

(C) Every living organism can utilize food.

(D) None of the given.

14. In which of the following wheat eating pegions included ?

(A) Decomposer (B) Primary consumer.

(C) primary producers (D) secondary consumer.

15. which of the following is placed in upper most (highest) level of ecological pyramids.

(A) Herbivores (B) Carnivors

(C) Primary and Secondary Producers. (D) Primary and Secondary consumer.

16. As we proceed in food chain, bio-mass.....

(A) Remain Same (B) Decreases

(C) Increases (D) Initially same and later keep decreasing.

17. In ecosystem the source of energy is....

(A) ATP (B) Sun (C) The Green plant (D) Sugar.

18. Who is primary consumer of biotic community ?

(A) Herbivores/ Grazing animal (B) Omnivores

(C) Scavengers (D) Carnivores.

19. In which of the following weeds are placed ?

(A) Primary producers (B) Secondary consumer.

(C) Primary consumer. (D) Decomposer.

20. When does the energy flow start in an ecosystem ?

(A) When material cycle starts

(B) When sun rises

(C) When any living organism gain food.

(D) When light energy is converted in chemical energy.

21. which of the following option is correct for storage place phosphorus and nitrogen respectively ?

(A) Consumer (B) Parental rock and environment

(C) Environment and producers (D) Environment and parental rock

22. An individual ''x'' uses mushroom as food then in which trophic level mushroom and''x'' are included?

	Mushroom	X	Foodchain
(A)	Secondary	Primary	Detritivorous food chain
(B)	Primary	Secondary	Detritivorous food chain
(C)	Primary	Secondary	Grazing food chain
(D)	Secondary	Primary	Grazing food chain

23. Which of the following is trophic level of the orchid staying on mango tree ?

(A) First (B) Tertiary/ Third

(C) Second (D) Fourth

24. Which age group in pyramid indicate less reproductive potential ?

(A) Bell shaped

(C) Triangular

(B) Inverted Bell shaped

(D) All of them have equal(same) potential

25. It is correct for ecosystem.....

(A)(Plants, Animals, Microorganisms) + Abiotic environment

(B) Community formed by various species present in a particular region.

(C) Animal, plants and micro- organisms.

(D) Abiotic factors

26. What is the original source of energy for the living organisms ?

(A) Carbohydrate (B) Sun light

(C) ATP (D) Lipid

27. In which of the following curd eating people are included ?

(A) Producer (B) First[1^{st}]

(C) Tertory[3^{rd}] (D) Second[2^{nd}]

28. The functional efficiency of ecosystem is effected when decomposers are removed from it, because..

(A) Energy flow will stop

(B) Rest components decomposition will become faster

(C) Herbivors will not get sun light

(D) Flow of nutrient will stop.

29. From which of the following detritus food chain will start ?

(A) Algae (B) Bacteria

(C) Protozoa (D) Virus

30. Which of the following is gaseous cycle ?

(1) Sulphur cycle (3) Phosphorous cycle

(2) Carbon cycle (4) Nitrogen cycle

(A) 1 (B)1,2 (C) 3, 4 (D) 1,3,4

31. At Each trophic level, in which form energy is lost ?

(A) Heat (B) Chemical

(C) Light (D) None

32. Which Source of eutrophication is the modern source of phosphorus ?

(A) Detergent (B) Fertilizer

(C) Faecal of animal (D) Rivers

33. It helps in absorbtion of phosphorous ?

(A) Leaves (B) Mycorriza

(C) Root (D) Stem

34. In a day, How many times an individual inspire and expire (breathing) ?

(A) 10,000 (B) 20,000

(C) 40,000 (D) 50,000

35. What percentage of total metabolic energy is produced through fermentation of lactic acid ?

(A) 80% (B) 70%

(C) 100% (D) 40%

36. Which adaptation is observe only in xerophytes ?

(A) CAM (C) Hatch-Slack

(B) TCA (D) C_3 cycle

37. Which of the following opteon is correct for CO_2 absorption in CAM ?

(A) During night (B) Only at midnight

(C) During day time (D) Morning

38. It- (I) Liver Liver lobule

(II) kidney Uriniferous tubule

(III) Ecolog:y X

than What does"x" represent ?

(A) Biotic community (B) Ecosystem

(C) Population (D) All of the given

39. What can be Explained through following chart ?

Birds	25 ppm
Big fishes	2ppm
Small fishes	0.5ppm
Zoo Plankton	0.5ppm
Phyto planktons	0.04 ppm
DDT in water	0.003ppb

(i) Biological magnification concentration of DDT

(ii) Aquatic food web

(iii) Food chain

(iv) DDT is non degrable

(v) One aquatic ecosystem

(A) (i), (ii), (iii) (B) (i), (iii), (iv)

(C) (ii), (iii), (iv) (D) (iii), (iv), (v)

40. With reference to process of decomposition arrange the following in proper sequence.

(1) Dead material Predation by detrivore digestion in animals defecation mixes with soil.

(2) MIneralization and synthesis of fertilization of substances.

(3) Complex substance $\xrightarrow[\text{enzymes}]{\text{Extracellular}}$ Ions & salts (simple sub.)

(4) Transport of soluble substances in the inner layer of soil

(A) 1,2,3,4 (2) 1,4,3,2 (3) 3,1,4,2 (4) 1,3,4,2

41. An element which is generally obtain from rocks.
From the given information which is correct option for the same

Pr esent in soil	1	How sin water body □	Major Portion	5

432 □ □ □ some portion

(A) (1) dissolve in water,
(2) deposited at the bottom of the sea
(3) used by forest
(4) eaten by fishes
(5) eaten by sea birds

(B) (1) dissolve in water,
(2) used by planktons
(3) Fishes
(4) Sea birds
(5) deposited at the bottom of the sea

(C) (1) Fishes
(2) Sea birds
(3) used by planktons
(4) Sea birds
(5) deposited at the bottom of the sea

(D) (1) Fishes
(2) used by planktons
(3) Fishes
(4) Sea birds
(5) None

42. Few statements are given below in reference with Thermodynamics, Which of the following option shows all correct statements for it ?
(I) Amount of energy is constant.
(II) During transfer of energy some amount of
energy is converted in to heat. (III) Free energy
= energy which can do work.
(IV) At each trophic level amount of stored energy reduces.
(A) (I) and(II)
(B) (III) and (iv)
(C) (i) and (iv)
(D) All of the given

43. Food chain always start with producer, which of the following is an exceptional to the given statement.

(A) Rat (C) Fox

(B) Lion (D) Earth - worm

44. X is released in Halophytes and Y is source of it, , Z process occurs in- estuary, then What does x,y,z indicate?

X- Potassium Y - rocks Z- Biological magnification

(A) X - DDT Y - Water

(B) Y- Biological magnification

(C) `X -Phosphorus Y - Sewage water Z- Eutrophication

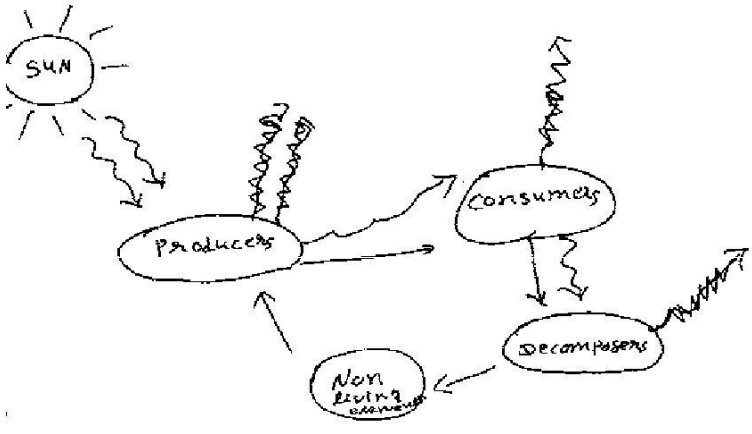
(D)None of this.

45. If energy produced by producer is 1000 units, than What amount of energy will be found in highest level of consumer ?

(A) 100 (B) 10

(C) 1 (D)1000

46.



What does given chart indicate ?

(A) Structure of ecosystem.

(B) Type of ecosystem

(C) First and second law of Thermodynamics

(D)- Bidirerectional flow of energy.

47. What is incorrect for oxygen ?

(A) Most of the metabolic energy is produced by it.

(B) Plants are included in the organisms producing it.

(C) It is essential for all the organisms.

(D) Its proportion in water is 90%.

48. X is source of y. but y never return to x, Than which option is wrong for x and y.

(A) X = plant, Y= organic compound (B) X= sun, Y=Energy

(C) a & b Both are correct. (D) A and B are Wrong.

49. What does pyramid of Biomass of an ecosystem indicate in....

(A) Number of species in each trophic level

(B) Number of organisms in each trophic level

(C) Organisation of tissue of each trophic level

(D) All of the given.

50. Which option is correct for the given information ?

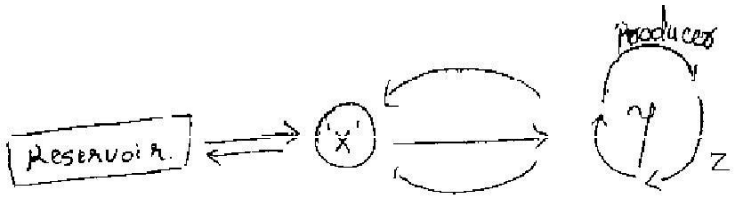
(1) Ecosystem is an outcome of an interaction between all living components and non- living components of Environment.

(2) GPP= NPP- loss due to respiration

(3) Primary productivity is measured in dry biomass.

(A) TFT (B)FFT

(C) FTF (D)TTF.

51. 

(A) x = Exchange Place y = Consumer z = Population

(B) x = Exchange Place y = Population z = Mclro Organism

(C) x= Biotic Community y = Population z = Consumer

(D) x = Exchange Place y = Biotic Community z = Consumer

52. What is responsible for change in the size of population of any particular area ?

(A) Availability of food. (C) Pressure

(B) Predation (D) All three

53. In one forest maximum 500 lions can be allowed with than what does 500 indicate ?

(A) Maximum birth rate (B) Population of lion

(C) Carrying Capacity of Population (D) Related birth rate

54. At which vital index population is stable ?

(A) 1 (B) 0

(C) Infinitive (D) 100

55. In any of the ecosystem man can be....

(A) Primary Consumer (C) Secondary Consumer

(B) Producer (D) a & c

56. If earth is considered a unit region then biosphere can be compared to....

(A) Eco-System (C) Population

(B) Biotic Community (D) Species

57. If earth is considered a unit region then it can be compared to....

(A) Eco-System (B) Population

(C) Biotic Community (D) Species

58. Who accepts the nutrient released in environment by decomposer ?

(A) Consumers (B) Producers

(C) Secondary Consumers (D) None of the given

59. If herbivores are "5" in number in the given food chain then, what will be the total number of trophic layers in the it ?

(A) 7 (B) 8

(C) 5 (D) can not be predicted

60. which organism provided useable phosphate from dead organisms?

(A) Fungi, Bacteria (B) Fungi , Algae

(C) Bacteria, Algae (D) Bacteria, Fungi

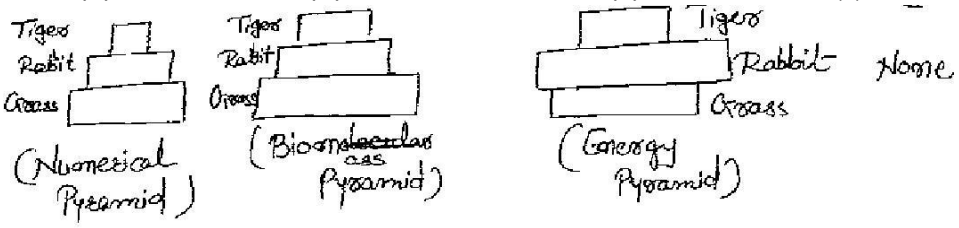
61. How many times do we breathe per day ?

(A) 20,000 (B) 40,000

(C) 20,000 (D) None of theme

62. Which Pyramid is not correct.....

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



63. It is first stem of the decomposition of organic compound.

(A) Fragmentation - In body of Scavengers

(B) Catabolism - In body of decomposer

(C) Leaching - In soil

(D) Catabolism - In soil

64. Autotrophs use [X] and Produces [Y], which is store as [Z], which of the given option is correct for X, Y, and Z ?

	X	Y	Z
(A)	Sunlight	Nutrient	Chemical
(B)	Energy	Chemical energy	Sunlight
(C)	Grass (Herb)	Energy	Starch
(D)	Sunlight	Glycogen	ATP

65. What is an Original Source of energy flow in any food chain ?

(A) Sun (B) Produces

(C) Primary (D) None

66. Immature fall of floral bud and fruits are observed in a farm, and on leaves Red and purple pigments spots are observed, In which of following place is Such Symptoms will not be observed in plants

(A) Sea shore (B) Bank of river

(C) Foot hills of mountain (D) Red Soil

67. who is responsible for the process like, Phosphate Containing Organic compound Phosphate

(A) Certain fungi (B) Certain algae

(C) Certain Specific bacteria (D) All three

68. which of the following eco-system has highest annual primary productivity ?

(A) Tropical deciduous forest

(B) Tropical Rain forest

(C) Temperate deciduous forest

(D) Temperate Ever green forest.

69. Which of the following is not a functional unit of ecosystem ?

(A) Stratification (B) Flow of energy

(C) Decompos (D) productivity.

70. Which of the following associations do not establish functional interspeciific association ?

(A) Mutualism (B) Exoparasite

(C) Endoparasite (D) Commensalism

71. Which statement is correct ?

(A) Plant uses CO_2 during respiration.

(B) Biomass of the plant is available to only herbivores.

(C) In all CO_2 acceptor plants, organic compounds are produce through photosynthesis.

(D) All three.

72. It is the type of photosynthesis occurs in most of the plants ?

(A) C_4 - Cycle (B) C_3 - Cycle

(C) CAM - Cycle (D) C_2 -Cycle

73. In which of the following alimentary canal, '' starch glucose'' is produced ?

(A) Producer (B) I^{st} trophic layer

(C) II^{nd} trophic layer (D) All of types

74. Which is the correct options ?

Interspecific association	**Examples**
(i) Reproductive	(x) Producer Herbivores Carnivores.
(ii) Productive	(y) Animals and dispersion of fruit seed.
(iii) Nutritional	(z) Mimicry

(A)	(B)	(C)	(D)
(i): Z	(i): Z	(i): Y	(i):Y
(ii):X	(ii): Y	(ii): Z	(ii): X
(iii): Y	(iii): X	(iii): X	(iii) : Z

75. In an ecosystem, Which of the following is unidirectional ?

(A)Sulphur (B) Organic nutrient

(C) carbon (D) Free energy

76. Who is first to receive Phosphate released through leaching in phosphate cycle ?

(A) Decomposer (B) producer

(C) Consumer (D) None of the given

77. Which of the following is not a pair of Gaseous cycle ?

(A) P&N (B) N & S

(C) N & S (D) C & P

78. What is indicated by Pyramid of number ?

(A) Number of individuals at every trophic layer.

(B) Species belonging to a particular region.

(C) Number of member of biotic- community

(D) None of the given.

79. Which of the following has maximun importance (value) in grass-land.

(A) Secondary Production (B) Net Production

(C) Tertiary Production (D) Total Production.

80. Grass cow lion. If productivity of grass is 5000 kg/ Meter/ year. Then What will be the productivity of lion ? (In general)

(A) 500 (B) >50

(C) 1000 *kg* / *mter* ^{2} / *year*. (D) >100

81. Select correct statements

(i) If 90% of Carnivores are removed form forest, then forest area increases.

(ii) Generally 3 to 4 trophic layer are present in food chain due to loss of energy.

(iii) Food chain always possesses 2 to 8 trophic layers.

(iv) On removing 80% of tigers, member of herbivores will increase.

(A) (ii), (iv) (C) (i), (iii) (B) (i), (ii) (D) (iii), (iv)

82. In which stage of the Decomposition, larger surface area for future decomposition is availabel?

(A) $_1{}^{st}$ (B) 2^{nd} (C) 3^{rd} (D) All of the above

83. which option is Correct for the given statements x and y ?

X : fungi, showing law level of body organization

producer with thick wall. Y : On availability of

favorable condition they producer sporophytic

stage.

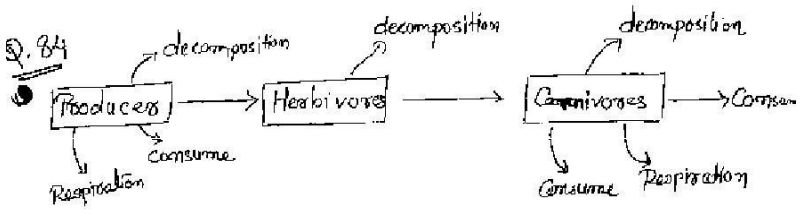
x y

(A)

(B)

(C)

(D)

84. 

In the given chart from carnivores to producer energy level gradually.

(A) Decreases

(B) Increases

(C) Decreases & increases both are possible

(D) None

85. which of the given option is shows more stable ecosystem ?

Producer	**primary consumer**	**Secondary consumer**	**Tertiary consumer**	**Total**
(A) 100	200	150	80	530
(b) 900	500	225	40	1665
(c) 200	100	125	75	500

(d) All of the given.

86. which of the following is one of the causes of cancer ?

(A) Obesity

(B) Artheroscerosis

(C) Inadequate of O_2 supply

(D) Hypertension

87. which option is

more suitable for

x and y ? X :

Animal cells

possesses

mitochondria.

Y : IN animal cell energy is released when carbohydrates are completely broken .

(A) Both are correct

(B) Both are wrong

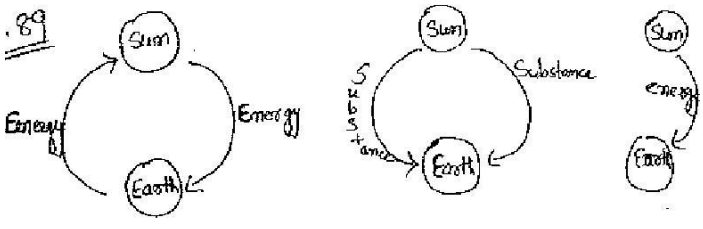
(C) If x is correct then only y is correct .

(D) X : correct Y : wrong

88. (X) (Y) from x energy is available to y and from y energy do not return to x then which energy option correct ?

	X	Y
(A)	The earth	The Sun
(B)	The Sun	The earth
(C)	The Sun	A biotic
(D)	All of given	

89. Select the correct option ?



(A) Figure (B) Figure (C) Figure (D) Figure

90. Which of the following stage is possible by the activity of Heterotrophs ?

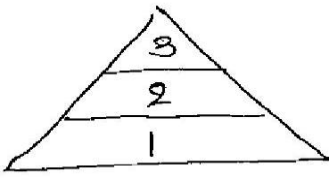
(A) Utility (B) Re-accommodation

(C) Decomposition (D) All the given

91. The herbaceous plant has 100 gram weight then what would be the average bio-mass of the same ?

(A) 100 gram (B) 20-25 gram (C) 10-15 gram (D) 85-90 gram

92. In the given pyramid of energy which of the following can be placed in first trophic level ?



(A) Decomposer (B) plants (C) a & b Both (D) None

93. X is structaral unit of economy and y is structra unit of x then ... what is the x and the y ?

	X	Y
(a)	Biotic community	- Biomass, Abiotic factor
(b)	Ecosystem	- Biomass,Biotic factor
(c)	Biomass	- Ecosystem
(d)	Food web	- Ecosystem

94. X is maintained by man, but it is harmful to y ,the x and y are (?)

X Y

(A) Natural eco-system - Man made ecosystem

(b) Man made ecosystem - Natural eco-system

(c) Any one from a & b

(d) Noun of these

95. X is included in environmental factors; y is included in ediphic (soil related) then the x & y is....

X	Y
(A) Air	Water
(B) Water	Air
(C) Soil	Light
(D) Wind	Air

96. In material cycle which of the following is last acceptor of material ?

(A) Producer (C) Decomposer

(B) Consumer (D) Is not possing

97. Which one is the maximum suitable to from top of the energy pyraimd ?

(A) Therdary consumer (B) Secondary consumer

(C) Producers (D) None of this

98. Which of the following option is correct for the column I and II ?

Column - I	***Column - II***
(P) Grass	(i) Decomposer
(Q) Herbivors	(ii) Secondary carnivores
(R) Frog	(iii) producer
(S) Hawk	(iv) primary consumer
	(v) primary carnivores

(A) (P-iii) (Q-i) (R-v) (S-iv) (B) (P-i) (Q-iii) (R-iv) (S-v)

(C) (P-iii) (Q-v) (R-iv) (S-ii) (D) (P-ii) (Q-iv) (R-v) (S-ii)

99. Which component are basic in maintaing body processes?

(A) Carbohydrate (B) Water

(C) Energy (D) All of this

100. What is mycorhizer ?

(A) Root + Fungi = Symbiotic (B) Root+ bacteria = Symbiotic

(C) fungi +Root = Parasitism (D) Fungi +leaf = Parasitism

101. It is key- compound for all living organism ?

(A) Sulphur (B) Phosphorus

(C) Nitrogen (D) Calcium

102. What is obtained by the activity of decomposer for the producers ?

(A) Nutrient (C) Food

(B) Carbohydrate (D) Energy

103. It 1 lac living organisms are included in third trophic level than what would be the number of producers ?

(A)10 lac (B)10 thousand

(C) 1 thousand (D) 1crore (million)

104. In an ecosystem, when organisms can be included in more than one trophic level ?

(A) Phytoplankton (B) Fish

(C) Zooplankton (D) Frog

105. When organism of aquatic ecosystem is at equivalent trophic level in when cow is included ?

(A) Zooplankton (B) Phytoplankton

(C) Nekton (D) Benthos

106. Which of the follows is an in complent Ecosystem ?

(A) Grass land (B) Cave (C) River (D) Wet land

107. What is correct for human ?

(A) Herbivore (B) Carnivore (C) Autotrophs (D) Omnivores

108. which type of food chain is represented by following example ?

Dead animalsinsect seavengerFrogSnake

(A) Grazing food chain (B) Detritivorous food chain

(C) Decomposer food chain (D) Predators food chain.

109. which type of organisms , fungi & Bacteria of forest ecosystem generally called ?

(A) Producers (B) Decomposers

(C) Primary consumer (D) Secondary consumers

110. what is correct for the artificial ecosystem ?

(A) Biodiversity is less

(B) Biodiversity is High

(C) Ecosystem can not be form by human

(D) It is more stable than Natural ecosystem

****

ANSWER KEY

1	C	31	A	61	A	91	C
2	B	32	A	62	C	92	C
3	C	33	B	63	A	93	B
4	A	34	C	64	A	94	B
5	C	35	B	65	B	95	D
6	C	36	A	66	C	96	D
7	B	37	A	67	C	97	A
8	D	38	B	68	B	98	D
9	A	39	B	69	A	99	D
10	D	40	B	70	D	100	A
11	D	41	B	71	C	101	B
12	B	42	D	72	B	102	A
13	A	43	D	73	B	103	D
14	B	44	C	74	C	104	B
15	B	45	C	75	D	105	A
16	B	46	C	76	B	106	B
17	C	47	C	77	C	107	D
18	A	48	D	78	A	108	B
19	A	49	C	79	D	109	B
20	B	50	D	80	B	110	A
21	B	51	D	81	A		
22	B	52	D	82	A		
23	A	53	C	83	C		
24	B	54	D	84	B		
25	A	55	D	85	B		
26	B	56	B	86	C		
27	A	57	A	87	C		
28	D	58	B	88	B		
29	B	59	D	89	C		
30	C	60	D	90	D		

NEET Biology MCQ
Chapter-15 Biodiversity

1 How many bio-geographical regions are present in India?
A 3
B 4
C 7
D 10

2 Lime is added to the soil which is too
A Sandy
B Salty
C Alkaline
D Acidic

3 Which one of the following has maximum genetic diversity in India?
ATea
BTeak
C Mango
DWheat

4 Which one of the following areas in India, is a hotspot of biodiversity?
A Sunderbans
B Western Ghats
C Eastern Ghats
D Gangetic Plain

5 Darwin's finches are a good example of
A Convergent evolution
B Industrial melanism
C Connecting link
D Adaptive radiation

6 Which one of the following is an example ex-situ conservation?
A National park
B Wildlife sanctuary
C Seed bank
D Sacred groves

7 Which one of the following is not observed in biodiversity hotspots?
A Species richness
B Endemism
C Accelerated species loss
D Lesser inter-specific competition

8 Sacred groves are especially useful in

AGenerating environmental awareness
B Preventing soil erosion
C Year-round flow of water in rivers
D Conserving rare and threatened species

9 The term Alpha diversity refers to
A Genetic diversity
B Community and ecosystem diversity
C Species diversity
D Diversity among the plants

10 The percentage of forest cover recommended by the National Forest policy (1988) is
A 33% for plains and 67% for hills
B 37% for plains and 63% for hills
C 20% for plains and 70% for hills
D 23% for plains and 77% for hills

11 Select the correct statement about biodiversity
A The desert areas of Rajasthan and Gujarat have a very high level of desert animal species as well as numerous rare animals
B Large scale planting of BT cotton has no adverse effect on biodiversity
C Western Ghats have a very high degree of species richness and endemism
D Conservation of biodiversity in just a fad pursued by the developed countries

12 Biodiversity of a geographical region represents
A Genetic diversity present in the dominant species of the region
B Species endemic to the region
C Endangered species found in the region
D The diversity in the organisms living in the region

13 Global warming can be controlled by [NEET 2013]
A Reducing deforestation, cutting down use of fossil fuel
B Reducing reforestation, increasing the use of fossil fuel
C Increasing deforestation, slowing down the growth of human population
D Increasing deforestation, reducing efficiency of energy usage

14. Which one of the following is not used for ex situ plant conservation? [NEET 2013]
A Field gene banks
B Seed banks
C Shifting cultivation
D Botanical Gardens

15. Which of the following represent maximum number of species among global biodiversity? [NEET 2013]
A Algae
B Lichens
C Fungi
D Mosses and Ferns

16. Prolonged liberal irrigation of agricultural fields is likely to create the problem of
A Aridity
B Metal toxicity
C Salinity
D Acidity

17. The greatest problem of water conservation is to reduce the amount of
A Precipitation
B Runoff water
C Groundwater
D Evaporation

18. Maximum nutritional diversity is found in the group:
A Monera
B Plantae
C Fungi
D Animalia

19. Which one of the following areas in India, is a hotspot of biodiversity?
A Sunderbans
B Western Ghats
C Eastern Ghats
D Gangetic Plain

20 Which one of the following is not included under in situ conservation?
A National park
B Wild life sanctuary
C Zoological garden
D Biosphere reserve

21. An inexhaustible non-conventional universal source of energy is
A. Wind energy
B Solar energy
C Hydrothermal energy
D Tidal energy

22. Which one of the following expanded forms of the followings acronyms is correct?
A IUCN = International Union for Conservation of Nature and Natural Resources
B IPCC = International Panel for Climate Change
C UNEP = United Nations Environmental Policy
D EPA = Environmental Pollution Agency

23. Wild life conservation aims at :
(a) Maintaining the ecological process
(b) To enrich the wildlife diversity with exotic species
(c) Preventing migration of species
(d) Maintaining the diversity of life

24. The correct statements are
A a, b
B b, c
C c, d
D a, d

25. Plants like Aegle marmelos, Ocimum sanctum and Ficus religiosa are a group of plants designated as
A Traditional food crops
B Sacred species of plants
C Medicinal plant species
D Lesser known food plants

26. –1°C to 13°C annual variations in the intensity and duration of temperature and 50 to 250 cm annual variation in precipitation, account for the formation of major biome as:
A Tropical forest
B Coniferous forest
C Temperate forest
D Grassland

27. Sacred groves are especially useful in
A Generating environmental awareness
B Preventing soil erosion
C Year-round flow of water in rivers
D Conserving rare and threatened species

28. Some of the nutrient cycles are labelled as below: Sulphur cycle (a), Phosphorus cycle (b), Carbon cycle (c) and Nitrogen cycle (d) Of these, the sedimentary cycle is represented by
A (a) only
B (b) only
C (c) only
D (a) and (b) only

29. Study the four statements (a–d) given below and select the two correct ones out of them
(a) A lion eating a deer and a sparrow feeding on grain are ecologically similar in being consumers
(b) Predator star fish Pisaster helps in maintaining species diversity of some invertebrates
(c) Predators ultimately lead to the extinction of prey species
(d) Production of chemicals such as nicotine, strychnine by the plants are metabolic disorders
The two correct statements are:
A (a) and (b)
B (b) and (c)
C (c) and (d)
D

30. Which is the right option for the tallest and the smallest Gymnosperm plant ?
(a) Eucalyptus and Zamiapygmea
(b) Wolffia globosa and Eucalyptus
(c) Sequoia sempervirens and Zamia pygmea
(d) Sequoia sempervirens and Wolffia globosa

31. Which one is odd for species diversity ?
(a) diversity
(b) diversity
(c) diversity
(d) diversity

32. How many biosphere reserves are present in India ?
(a) 41
(b) 34
(c) 14
(d) 43

33. Which is the correct option the Amazon rain forest ?
I. In this rain forest there might be at least two million insects species waiting to be discovered and named.
II. This forest is known as lungs of the planet.
III. In this forest digging of mine is performed by dynamine.
IV. This forest are destroyed for the cultivation of soyabeans.
V. This forest contains world famous Biodiversity
(a) i, ii, iv, v (b) i, ii, iii, iv (c) ii, iii, iv, v (d) iii, v, iv

34. Which microorganism is responsible for synthesis of antibiotics?
(a) Bacteria (b) Virus (c) Fungus (d) Algae

35. In which region of South America maximum species of birds can be found ?
(a) Equador (b) Brazil (c) Colombia (d) Peru

36. Which scientist has classified species diversity ?
(a) Thoeprestus (b) Lineus (c) Whittaker (d) Treshaw

37. Which group is meant for Endemic species of birds ?
(a) Nilgiri pipit, Rofous babbler, Lesser-Florican
(b) Lesser-Florican, Nilgiri wood pigeon, Malabar parakeet
(c) Malabar parakeet, Niligiri pipit, Rofousbabbler
(d) all the above

38. How many Indian plant species are used to extract essential oils and scents ?
(a) 50 (b) 500 (c) 50,000 (d) 5000

39. Which is the correct option.
(a) There is chance inNatural selection in evolutionprocess due to alpha biodiversity
(b) There is chance in Natural selection in process of evolution due to genetic diversity
(c) There is chance in Natural selection in process of evolution due to Ecosystem biodiversity
(d) There is chance in Natural selection in process of due to biocommunity diversity
40. Which is the state plant of Gujarat ?
(a) Polyalthia (b) Prosopis (c) Ficus (d) Neem

41. Because of deforestation, decreased transpiration leads to
a.less cloud formation
b.more cloud formation
c. more water storage
d. more oxygen

42. List prepared by International Union for Conservation of Nature and Natural Resources for endangered species is classified as
a.Brown List
b.White List
c.Black List
d.Red List

43.Term used for species which is in danger of being extinct in near future is
a.degradability
b. extinct
c. endangered
d. global biodiversity

43. International organization IUCN is abbreviation of
a.Internal Union Council for Natural gas
b. International Union Council for Nature
c. International Union for Conservation of Nature
d. Internal United Council of Nations

44. Major causes of extinction of different species includes
a.habitat loss and over-hunting
b. climate change and pollution
c. deforestation
d. all of above

45. Which of the following region has maximum diversity
a) mangrooves
b) temperate rainforest
c) taiga
d)coral reefs

46. Approximately, 50% of total world species are present on
a) tropical rain forest
b) temperate rain forest
c) temperate deciduous forest
d) coral reefs

47. Biodiversity
a) increases towards the equator
b) decreases towards the equator
c) remains same throughout the planet
d) has no effect on change in latitude

48. The most important reason for decrease in biodiversity is
a) habitat pollution
b) introduction of exotic species
c) over-exploitation
d) habitat destruction

49. Dodo is
a) endangered
b) critically endangered
c) rare
d) extinct

50. Blue whale is placed under
a) endangered
b) critically endangered
c) rare
d) extinct

Answer key

1	B	18	D	35	D
2	D	19	B	36	D
3	C	20	C	37	C
4	B	21	D	38	B
5	D	22	A	39	C
6	C	23	B	40	C
7	C	24	B	41	A
8	D	25	B	42	C
9	C	26	B	43	C
10	B	27	A	44	D
11	C	28	A	45	A
12	D	29	A	46	B
13	A	30	D	47	A
14	C	31	B	48	C
15	C	32	A	49	D
16	A	33	C	50	A
17	C	34	C		

NEET MCQ QUESTIONS

CHAPTER-16: ENVIRONMENTAL ISSUES

1. Amrita Devi Bishnoi award will be given to the individuals or communities who worked for protection of

a) Wild plants b) Wild animals c) Wildlife d) Plants and animals

2, Which of the following is used for removing particulate matter from polluted air.

Electrostatic precitator b) Wet scrubber c) Incubator d) Incinerator

3.Name the metals that are present in catalytic converters.

a) Platinum b) Palladium c) Rhodium d) All three options

4. Biochemical oxygen demand is an indicator of pollution of

a) Air b) Water c) Noise d) Soil

5. In domestic sewage , indicate the percentage of impurities.

a) 0.001 b) 0.01 c) 0.1 d) 1.0

6. The unit by which thickness of Ozone layer is measured.

a) Psi b) A.M.U. c) dB d) D.U.

7. Which of the following is made polyblend for construction of roads.

a) Mr.A.K.Banerji b) Mr.Ahmed Khan c) Mr.Ramesh Chanra Dagar d) Mr.B.K.Das

8. The process of burning solid wastes without oxygen is called.

a) Combustion b) Decomposition c) Incineration d) Eutrophication

9. Some aquatic animals die due to algal bloom because of lack of.

a) Oxygen b) Nitrogen c) Carbon dioxide d) Sculpture

10. The natural ageing of a lake by nutrient enrichment is called.

a) Biomagnification b) Eutrophication c) Algal bloom d) Desertificatio

11. According to CPCB, Which size of dust particles in air pollution are harmful to human beings

a) 0.25 micrometers b) 2.5 micrometers c) Less than 2.5 d) Both b and c

12. In which year Govt. of India has introduced Joint Forest Policy.

a) 1970 b) 1980 c) 1990 d) 2000

13. Which of following is responsible for depletion of ozone layer.

a) Carbon dioxide b) Hydrocarbons c) Chlorofluorocarbons d) Methane

14. What is the main reason for desertification ?

a) Deforestation b) Over-cultivation c) Urbanisation d) Over-grazing

15. As per NFP 1988 how much per cent forest cover for plains should be there in India

a) 22 b) 33 c) 44 d) 55

16. What is the cause of decrease in the population of birds in an aquatic food chain
a) Due to DDT b) Due to 2,4D c) Due to CFCs d) Due to ABA

17. Which of the following is the Terror of Bengal
a) Banyan tree b) Water Hyacinth c) Hydrilla d) Vallisneria

18. Which of the following is the dominant among greenhouse gases
a) Methane b) CFCs c) Oxides of nitrogen d) Carbon dioxide

19. What are the effects of UB-B radiations on human beings
A) Ageing of skin b) Skin cancers c) Snow-blindness d) All the options

20. Name the problems associated with Green Revolution.
a) Waterlogging b) Soil salinity c) Both a and b d) None

21. Which of the compounds are responsible for accelerated eutrophication
a) Sulphates b) Nitrates c) Phosphates d) Both b and c
22. FOAM is associated with
a) STDs b) STP c) MTP d) MOET
23.Which one of the following is a wrong statement?
a Greenhouse effect is a natural phenomenon
b Eutrophication is a natural phenomenon in freshwater bodies
c Most of the forests have been lost in tropical areas
d Ozone in upper part of atmosphere is harmful to animals

24.In an area where DDT had been used extensively, the population of birds declined significantly because
a Cobras were feeding exclusively on birds
b Many of the birds eggs laid, did not hatch
c Birds stopped laying eggs
d Earthworms in the area got eradicated

25.Measuring Biochemical Oxygen Demand (BOD) is a method used for
a Measuring the activity of Saccharomyces cerevisiae in producing curd on a commercial scale
b Working out the efficiency of R.B.Cs. about their capacity to carry oxygen
c Estimating the amount of organic matter in sewage water
d Working out the efficiency of oil driven automobile engines

26.dB is a standard abbreviation used for the quantitative expression of
a The dominant Bacillus in a culture
b The density of bacteria in a medium
c A certain pesticide
d A particular pollutant

27.Identify the correctly matched pair
a Basal Convention – Biodiversity Conservation

b Montreal Protocol - Global warming

c Kyoto protocol – Climatic change

d Ramsar Convention – Ground water pollution

28.Common indicator organism of water pollution is:

a Entamoeba histolytica

b Escherichia coli

c Eichhornia crassipes

d Lemna paucicostata

29.Shell of egg in bird becomes thin (not properly formed) due to the pollution of pesticides. This is due to interference in the activity of :

a Calmodulin

b Mg ATPase

c Ca ATPase

d None of these

30.Lichens can be used as :

a Source of wood

b Initial vegetation for waste lands

c Bio-indicator for water and air pollution

d To check the air pollution

31.Industrial melanism is an example of

a Protective resemblance with the surrounding

b Drug resistance

c Defensive adaptation of skin against UV radiations

d Darkening of skin due to industries

32.Carbon dioxide is called green-house gas because it is

a Transparent to sunlight but traps heat

b Transparent to heat but traps sunlight

c Used in green-house to increase plant growth

d Transparent to both sunlight and heat

33.Trichoderma harzianum has proved a useful microorganism for:

a Reclamation of wastelands

b Bioremediation of contaminated soils

c Biological control of soil-borne plant pathogens

d Gene transfer in higher plants

34.The two gases making highest relative contribution to the greenhouse gases are

a CO_2 and N_2O

b CO_2 and CH_4

c CH_4 and N_2O

d CFC_5 and N_2O

35.The slow rate of decomposition of fallen logs in nature is due to their:

a Poor nitrogen content

b Low moisture content

c Low cellulose content

d Anaerobic environment around them

36.Which one of the following is not a bioindicator of water pollution?

a Blood-worms

b Sludge-worms

c Sewage fungus

d Stone flies

37.Which one of the following is the correct percentage of the two (out of the total of 4) green house gases that contribute to the total global warming?

a CO_2 40%,CFCs 30%

b CFCs 14%, Methane 20%

c Methane 20%, N_2O 18%

d N_2O 6%, CO_2 86%

38.UV Radiation from sunlight produces
a) ozone
b) sulphur dioxide
c) CO
d)Flourides

39. water pollution is due to
a)sulphur dioxide
b)cardon dioxide
c)oxygen
d)industrial discharges

40.which is most ionizing
a)X-rays
b)Y-rays
c)β-rays
d)α-rays

41.water blooms are formed by
a)lemna
b)hydrilla
c)water hyacinath
d)plankotonic algae

42.black lung disease common in
a)farmers

b)workers of petrochemical industry
c)coal workers
d) Refinery Workers

43. Acid rain will not affect
a)Lithosphere
b)plants
c)Ozone layers
d) animals

44. increased asthmatic attacks in certain season are related to
a)inhalation of seasonal pollen
b)eating of seasonal vegetables
c) low temperature
d)wet and dry environment

45.Aerosols having carbon and fluorine compounds are chiefly released by
a)Refineries
b)Automobiles
c)Industries
d)Jets

46.pollution caused by persistent pesticidesis more hazardous to
a)herbivores
b)producers
c)first level carnivores
d)top carnivores

47. Increase in atmospheric temperature due to carbon dioxide is
a)Pasteur effect
b)Blackman effect
c)Emerson effect
d)Green house effect

48.for clean environment, which one is non essential
a)producer
b)polluter
c)consumer
d)decomposer

49.Air pollution is not caused by
a)pollen grains
b)hydroelectric power
c)industries
d)automobiles

50. Methane gas producing field is
a)wheat field
b)paddy field
c)cotton field
d)groundnut field

Answer key

1. C
2. A
3. D
4. B
5. C
6. D
7. B
8. C
9. A
10. B
11. D
12. B
13. C
14. C
15. B
16. A
17. B
18. D
19. D
20. C
21. D
22. B
23. A
24. B
25. C
26. D
27. C
28. B
29. C
30. D
31. D
32. C
33. C
34. B
35. C
36. A
37. C
38. A
39. D
40. A
41. D
42. C
43. C
44. A
45. D
46. D
47. D
48. B
49. B
50. B