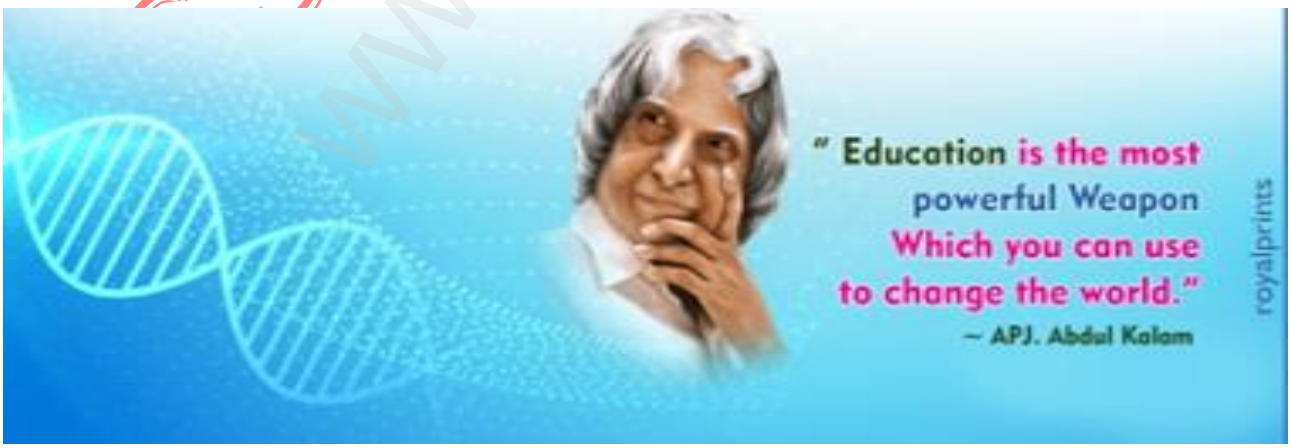
CHAPTER WISE ONE MARK TEST



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BEST WAY(ZOOLOGY)

REPRODUCTION IN ORGANISAMS

(Chapter – 1 : One mark Test)

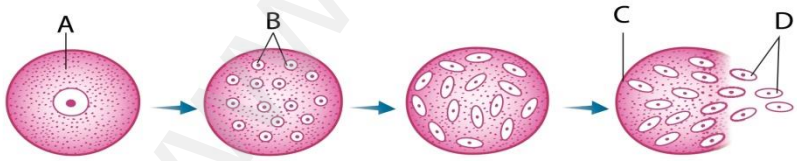
STD : XII
SUB : BIO - ZOOLOGY

MARKS: 50
TIME : 45 Mins

1. Which one is the fundamental features of all living organisms ?
   a) Reproduction b) Growth c) Development d) Maturation
2. Which one is the correct statement about the reproduction

a) Birth - growth - development - maturation - reproduction - death
b) Birth - development - growth - reproduction - maturation - death
c) Birth - development - reproduction - growth - maturation - death
d) Death - birth - development - growth - reproduction - maturation

3. Asexual reproduction
   (i) Single parent without the involvement of gamete formation
   (ii) The off spring produced are genetically identical
   (iii) It is usually by amitotic or mitotic division of the somatic (body) cells
   (iv) Two parents participate in the reproductive process
   (a) (i) (ii) and (iii) (b) (i) (ii) and (iv)
   (c) (ii) (iii) and (iv) (d) (i) (iii) and (iv)
4. **Assertion (A):** Reproduction enables the continuity of the species generation after generation
   Reason (R) : Reproduction is a biological process in which an organism give rise to young ones similar to itself.
   a) If both A and R are true and R is correct explanation for A
   b) If both A and R are true but R is not the correct explanation for A
   c) If A is true but R is false
   d) If both A and R are false.
5. Given below is the diagrammatic sketch of multiple fission in plasmodium. Identify the labeled A, B, C and D select right option.



A	B	C	D
a) Merozoites	Repturing schizoint wall	Daughter nuclei	Schizont
b) Schizont	Daughter nuclei	Repturing schizoint wall	Merozoite
c) Merozoites	Daughter nuclei	Schizont	Repturing wall
d) Merozoites	Daughter nuclei	Repturingschzont wall	Schizont

6. Which type of reproduction contractile vacuoles cease to function and disappear ?
   a) Oblique binary fission b) Longitudinal binary fission
   c) Transverse binary fission d) Simple binary fission

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7. Match it:

(i) Simple binary fission	A - Ceratium
(ii) Transverse binary fission	B - Flagellum
(iii) Longitudinal binary fission	C - Paramecium
(iv) Oblique binary fission	D - Amoeba

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

8 Given following statements which one is True / False

(i) In multiple fission parent body divides into many similar daughter cells simultaneously

(ii) In multiple fission produce four or many daughter individuals by equal cell division and the going ones to not separate until the process is complete repeated fission

(iii) In plasmodium – multiple fission occurs in schizont , the daughter individuals are called sporozoties

(iv) Plasmodium multiple fission occur inthe occyte,the daughter individual called merozoties

	(i)	**(ii)**	**(iii)**	**(iv)**
a)	True	True	False	False
b)	True	False	True	False
c)	False	False	True	True
d)	False	True	False	True

9 In favourable conditions, the encysted amoeba divides by multiple fission and produces many minute amoeba is called as

(a) Encasement (b) Pseudopodiospore (c) Cyst (d) Pseudopodia

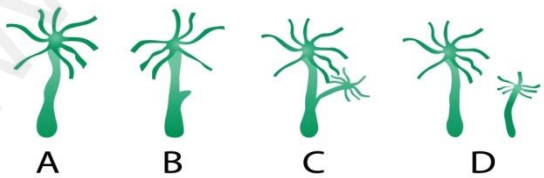
10. Which animal contains micronucleus and macronucleus ?

a) Paramecium b) Planaria c) Euglena d) Amoeba

11. Exogenous budding seen in

(a) Noctiluca (b) Sponges (c) Hydra (d) Giant Amoeba

12. Study of the following figures and select the correct statement regarding these.



i) Budding in Hydra

ii) Parent body produces one or more bunds and each bud grows into a young one

iii) Buds separate from the parent to leads to normal life

iv) In hydra – Endgeneous budding.

a) (i) (ii) and (iii) b) (i) (ii) and (iv)

c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

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13. Which one is correct pair ?

(a) Endogenous budding	-	Noctiluca
(b) Exogenous budding	-	Sponges
(c) Sporulation	-	Opalin
(d) Budding	-	Pelomyxa

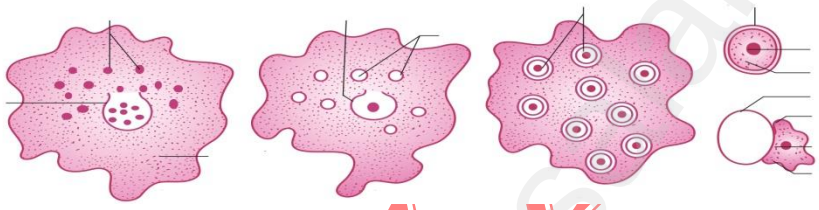
14. First regeneration regrowth studied in
(a) 1740 (b) 1741 (c) 1840 (d) 1841

15. Which technique is used for the cultivation of sponges ?
a) Fragmentation b) Artificial parthenogenesis c) Regeneration d) Apolysis

16. Which animal contain proglottids ?
(a) Taenia solium (b) Leucosolenia (c) Opalina (d) Pleomyxa

17. Which method is very significant since it helps in transferring the development embryo‘s from host (Tape worm) ?
a) Plasmotomy (b) Soprulation (c) Apolysis (d) Budding

18. Below the diagram about Amoeba which type of asexual reproduction seen in



a) Gemmile formation b) Strobilation
c) Sporulation d) Regeneration

19. External tertilization seen in
(a) Fishes (b) Ambhibians (c) Reptiles (d) Both (a) and (b)

20. Choose the correct combination of sexual reproduction, match the examples given under column I with the given under column II

	COLUMN I	COLUMN II
A	Autogamy	(i) Man
B	Hologamy	(ii) Monocystis
C	Isogamy	(iii) Trichonympha
D	Anisogamy	(iv) Actinophaerium

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

21. Syngamy means
(a) Conjugation (b) Fertilization
(c) Parthenogenesis (d) Asexual reproduction

22. The male and female gametes are produced by the same cell or organism and both gametes fuse together to form a zygote.
(a) Autogamy (b) Exogamy (c) Hologamy (d) Paedogamy

23. Conjugation is observed in
a) Paramecium (b) Vorticella (c) Bacteria (Prokaryotes) (d) All the above

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24. **Assertion (A):** Natural Parthenogenesis
Reason (R) : Parthenogenesis occur regular constantly and naturally in their life cycle
(a) Both A and R are true
(b) Both A and R are true but R is correct explanation of A
(c) A is tuue but R is false
(d) A is false but R is true

25. Who was first discovered by parthenogenesis ?
(a) Abraham Trembley (b) Charles Bonnet
(c) Alfred Heshey (d) Martha Chase

26. The Organisms reproductive and their off springs reach maturity period is called as
(a) Juvenile phase (b) Reproductive phase
(c) Senescent phase (d) Vegetative phase

27. Given following statements which one is True / False.
(i) **In exogamy**, the male and female gametes are produced by different parents and they fuse to form a zygote
(ii) **Paedogamy** is the sexual union of young individuals produced immediately after the division of the adult parent cell by mitosis
(iii) **In merogamy** the fusion of large sized ang morphologically different gametes take place
(iv) **Isogamy** the without fusion of morphological and physiological identical gametes

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

28. Match column I with column II and choose the correct option

	COLUMN I	COLUMN II
A	Arrhenotoky	(i) Radia larva
B	Thelytoky	(ii) Aphis
C	Amphitoky	(iii) Solenobia
D	Paedogenesis	(iv) Honey bees

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

29. Which unfertilized egg (ovum) is induced to develop into a complete individuals by physical or chemical stimuli ?
(a) Complete Parthenogenesis (b) Incomplete Parthenogenesis
(c) Nature Parthenogenesis (d) Artificial Parthenogenesis

30. The events in sexual reproduction are
(i) Pre-fertilisation (ii) Fertilisation (iii) Post-fertilisation
The sequential order of their occurrence is
a) (ii)-(i)-(iii) b) (iii) – (ii) – (i)
c) (i)-(ii)- (iii) d) (i) –(iii)-(ii)

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31. Identify the animal that does not breed continuously.
a) Lizards b) Hen c) Rabbit d) Honey bee

32 In which type of parthenogenesis are only males produced?
a) Arrhenotoky b) Thelytoky c) Amphitoky d) Both (a) and (b)

33. The mode of reproduction in bacteria is by
a) Formation of gametes b) Endospore formation
c) Conjugation d) Zoospore formation

34. In which mode of reproduction variations are seen
a) Asexual b) Parthenogenesis c) Sexual d) Both (a) and (b)

35 **Assertion (A) :** In bee society, all the members are diploid except drones.
Reason (R) : Drones are produced by parthenogenesis.
a) If both A and R are true and R is correct explanation for A
b) If both A and R are true but R is not the correct explanation for A
c) If A is true but R is false
d) If both A and R are false.

36. **Assertion (A) :** Offspring's produced by asexual reproduction are genetically identical to the parent.
Reason (R) : Asexual reproduction involves only mitosis and no meiosis.
a) If both A and R are true and R is correct explanation for A
b) If both A and R are true but R is not the correct explanation for A
c) If A is true but R is false
d) If both A and R are false.

37. Which form of reproduction is correctly matched?
(a) Euglena transverse binary fission (b) Parameciumlongitudinal binary fission
(c) Amoeba multiple fission (d) Plasmodium binary fission

38. **Assertion (A) :** Viviparous animals give better protection to their offsprings.
Reason (R) : They lay their eggs in the safe places of the environment.
a) If both A and R are true and R is correct explanation for A
b) If both A and R are true but R is not the correct explanation for A
c) If A is true but R is false
d) If both A and R are false.

39 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 fertilization 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)

40. " Nothing lives forever, but life continues". What does it mean?
a) Older dies but new ones are produced by reproduction
b) Nothing can produce without death
c) Death has nothing to do with the continuation of life
d) Parthenogenesis is must for sexual reproduction

41 Seed formation without fertilization in flowering plants involves the process of
(a) Sporulation (b) Budding (c) Somatic hybridization (d) Apomixis

42. Budding as a normal mode if asexual reproduction is found in
(a) Hydra and sponges (b) Starfish and hydra
(c) Tapeworm and hydra (d) Sponges and starfishes

43. Parthenogenesis is a term of
(a) Budding (b) Asexual reproduction
(c) Sexual reproduction (d) Regeneration

44 Which of the following statements, support the view that elaborate sexual reproductive process develops 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 is in angiosperms and vertebrates.
a) (i), (ii) and (iii) b) (i), (iii) and (iv)
c) (i), (ii), and (iv) d) (ii), (iii) and (iv)

45. In complete parthenogenesis
(i) In some animals both sexual reproduction and parthenogenesis occur
(ii) In honey bees fertilized eggs develop into queen (female)
(iii) Unfertilized egged develop into drones (male)
(iv) The larva produce a new generation of larva by parthenogenesis.
(a) (i) (ii) and (iii) (b) (i) (iii) and (iv) (c) (ii) (iii) and (iv) (d) (i) (ii) and (iv)

46. Which type of breeding found in honey bees ?
a) Seasonal breeding b) Selective breeding
c) Continuous breeding d) Random breeding

47. Seasonal breeders seen in
(a) Frogs (b) Lizards (c) Deers (d) All of these

48. How many phases of life cycle take place in human?
(a) 1 (b) 2 (c) 3 (d) 4

49. Match column I with column II and choose the correct option

	COLUMN I		COLUMN II
A	External fertilization	(i)	Earth worm
B	Internal fertilization	(ii)	Cockroach
C	Bisexual	(iii)	Frogs and fishes
D	Unisexual	(iv)	Birds and mammals

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

50. Conjugation is common among
(a) Paramecium (b) Vorticella
(c) Bacteria (Prokaryotes) (d) All the above

ALL THE BEST

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BEST WAY (ZOOLOGY)

HUMAN REPRODUCTION

(Chapter – 2 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 50
TIME : 45 Mins

1. What are the main function of reproductive system?
   (i) To produce the gametes namely sperms and ova
   (ii) To transport sustain these gametes
   (iii) To nurtue the developing offspring
   (iv) To maintain homeostasis for survival of the individual
   a) (i) (ii) and (iii) b) (i) (ii) and (iv)
   c) (i) (iii) and (iv) d) (ii) (iii) and (iv)
2. Formation of gametes is called as
   a) Spermatogenesis b) Oogenesis
   c) Gametogenesis d) Organogenesis
3. Transfer of sperm by the male into the female genital track
   a) Implantation b) Insemination c) Placentation d) Parturition
4. Given below statement find out which one is True / False
   (i) **Cleavage** – rapid mitotic division of the zygote which convert the single zygote into the multicellular structure called blastocyst.
   (ii) **Placentation** – formation of placenta which is the intimate connection between foetus and uterine wall of the mother.
   (iii) **Gastrulation** – process by which blastocyst is changed into gastrula with two primary germ layers.
   (iv) **Organogenesis** – formation of specific tissues, organs and organs system from two germ layers.

	(i)	**(ii)**	**(iii)**	**(iv)**
a)	True	True	False	False
b)	True	False	False	True
c)	False	False	True	True
d)	False	True	True	False

5. What are primary reproductive organs of male and female?
   a) Testis and Ovary b) Ovary and Ova c) Parturition d) Fertilisation
6. Match column I with column II, Select the correct option from the male reproductive system

	COLUMN - I		**COLUMN - II**
A	Sertoli cells	i)	Negative feedback
B	Spermatogonic cells	ii)	Nurse cells
C	Inhibin	iii)	Germ cells
D	Interstitial cells	iv)	Leyding cells

   a) A-(iv) B-(iii) C-(iv) D-(i) b) A-(ii) B-(iii) C-(i) D-(iv)
   c) A-(ii) B-(iv) C-(iii) D-(i) d) A-(iv) B-(ii) C-(iii) D-(i)
7. Temporarily stores the spermatozoa is
   a) Rate testis b) Epididymis c) Vas deferens d) Vasa efferentis

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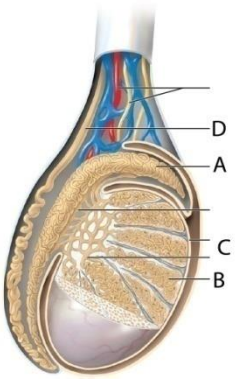
8. The given diagram shows L.S of testis showing varies parts. Identify the parts and Labeled.



a) A-Vas deferens	B-Epididymis	C-Tunica albuginea	D-Semifereous tubule
b) A- Epididymis	B- Semifereoustubule	C- Tunica albuginea	D- Vas deferens
c) A- Epididymis	B- Semifereous tubule	C-Tubules rectas	D- Vas deferens
d)) A- Epididymi	B-Lyding cells	C-Rete testis	D-Vasa deferens

9. Arrange the accessory ducts associated with the male reproductive system

a) Vasa efferentia → epididymis → vas deferens → rate testis
b) Vas deferens → epididymis → vasa efferentia → rate testis
c) Rate testis → vas efferentia → vas deferens → epididymi.
d) Rate testis → vasa efferentis → epididymis → vas deferens

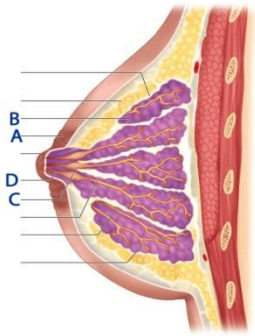
10. Read the following assertion and reason and select the correct answer.
Assertion (A) : The seminal vesicles secrete an alkaline fluid called seminal plasma.
Reason (R) : It contain fruetose sugar, ascorbic acid and prostaglandins.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

11. Energy for the movement of sperm produced from
a) Acrosome b) Nucleus c) Mitochondria d) Axial filaments

12. Semen
(i) Seminal fluid is a milky white it contains sperms and the seminal plasma
(ii) Semen contains vesiculase and hyaluronidase and proteolytic enzyme
(iii) Seminal fluid act as transport medium, provides nutrients and facilitate their movement
(iv) Secreted from the seminal vesicles, prostate gland and the bulbourethral glands
a) (i) (ii) and (iii) b) (i) (iii) and (iv)
c) (ii) (iii) and (iv) d) (i) (ii) and (iv)

13. Release of FSH and LH from pituitary being controlled by
a) Brain b) Thalamus c) Hypothalamus d) Medulla

14. The given diagram is of Mammary gland, Identify the parts labeled as A, B, Cand D



a) A-Areola,	B-Lobe,	C-Mammary ampulla	D-Lactiferous duct
b) A- Nipple	B-Adipose issue	C-alveoli	D-Lactiferous duct
c) A-Areola,	B-Lobe	C-Mammary duct	D-Lactei ferrous duct
d) A-Nipple	B-Adiposefissue	C-Alveoli	D-Mammary ampula

15. The germinal epithelium of ovary is enclosed by
a) Ovarian stroma b) Mesovarium c) Tunica albuginea d) None

16. Which of the following is middle thick muscular layer of uterus?
a) Perimetrium b) Myometrium c) Endometrium d) Mesovarium

17. Which of the following is inner glandular layer of uterus?
a) Perimetrium b) Myometrium c) Endometrium d) Mesovarium

18. Oestrogen is which type of hormone ?
a) Protein b) A. acid c) Glycoids d) Steroid

19. Match the homologous gland of male and female

A	Bartholin's gland	i)	Prostate gland
B	Skene's gland	ii)	Leyding cells
C	Mammary gland	iii)	Bulbourethral gland
D	Interstitial cells	iv)	Swet gland

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

20. Which cannot be considered as an indicator of a women's virginity?
a) Clitoris b) Hymen c) Labia major d) Labia minora

21. Mammary gland
(i) Internally each mammary gland consist of 2-25 lobes, separated by fat and connective tissues
(ii) Each lobe is made upof lobules which contain acini or alveoli lined epithelial cells
(iii) Alveoli open to mammary tubules, each lobe join to form a mammary duct
(iv) Several mammary duct join to form a wider mammary ampulla, connected to the lactiferous duct in the nipple
a) (i) Only b) (i), (ii) Only c) (i), (ii), (iii) Only d) (i), (ii), (iii) and (iv)

22. The whole process of spermatogenesis take place about
a) 64 days b) 28 days c) 64 hours d) 28 hours

23. How many number of sperms produced per day ?
a) 200 million b) Above 200 million
c) Below 200 million d)Above 300 million

24. Which hormone initiated spermatogenesis , starts at the age of puberty?
a) Gonadotropin Releasing Hormone(GnRH) b) Lutenzing Hormone (LH)
c) Follicle Stimulating Hormone (FSH) d) Human Chorionic Gonadotropin (HCG)

25. The size of human ovum is measured as
a) 75 μm b) 1.72 μ c) 100 μm d) 50 μm

26. Primary egg membrane is
a) Zona radiata b) Corona radiate c) Theca interna d) Zona pellucida

27. In human the fertilization of ovum takes place in the region called as
a) Uterus b) Vagena c) Fallopian duct d) Ovary

28. How many sperms produce in the life time of males?
(a) 500 billion (b) 500 Million (c) 400 billion (d) 400 billion

29. Acrosome of spermatozoan is derived from which part of the spermatid?
(a) Mitochodria (b) Golgi apparatus (c) Nucleus (d) Lysosome

30. Match it:-

A) Primary oocytes - (i) A fluid filled space the antrum develops the follicle
B) Primary follicles - (ii) Many layer of granulose cells new these layer
C) Secondary follicles-(iii) Single layer of granulose cells from primordial
D) Tertiary follicles - (iv) Oogonial cells start dividing enter prophase-I

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

31. Human ovum
i) Non – cleidoic, alecithal
ii) Cytoplasm of ovum is ooplasm
iii) Ooplasm contain large nucles called germinal vesicle
iv) Ovam is surrounded by four covenings
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (ii) (iii) and (iv) d) (i) (iii) and (iv)

32. Capacitation occur in
(a) Epididymis (b) Vas deferens
(c) Female reproductive track (d) Rete testis

33. Menstrual cycle
(i) The reproductive of female from menarch to menopause
(ii) Every cycle occurs approximately once in every 28/29 days
(iii) Cyclic menstruation is an indicator of normal reproductive phase
(a) (i) only (b) (iii) only (c) (ii) only (d) (i) (ii) and (iii)

34. Human ovarian cycle consists of 28 days ovulation take place on
(a) 5nd day of cycle (b) 14nd day of cycle
(c) 21nd day of cycle (d) 28nd day of cycle

35. Glans penis covered by
(a) Areomembrana (b) Prepuse (c) Metrium (d) None

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36. Which vital for good health, well – being,dignity, empowerment and productivity of women?
(a) Menstrual hygiene (b) Menstrial cups
(c) Sanitary napkins (d) Clothing materials

37. Which have been clean and safe identified as material usedto manage menstruation?
(a) Sanitary napkins (b) Tampons (c) Menstrualcups (d) All the above

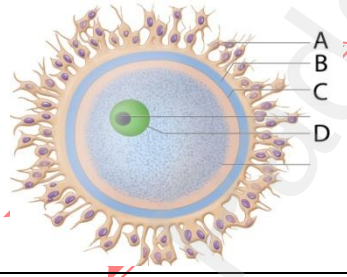
38. **Statement I -** The sperms deposited in the female reproductive track undergo capacitation
Statement II – Fertilisation occurs only if the ovum and sperms are transported simultaneously to the ampullary isthmic junction of the fallopian tube
(a) Statement I in correct and II wrong
(b) Statement I and II wrong
(c) Statement I and II correct
(d) Statement I is wrong and II is correct

39. Which embryonic layer develop the endoderm?
(a) Epiblast (b) Hypoblast (c) Both (a) and (b) (d) Chrionic villi

40. Which forms a small out pocketing of embryonic tissue at the caudal end of the yolk sac ?
a) Amnion b) Yolk Sac c) Allantois d) Chorion

41. Which layer of germ its derivatives and mammary gland ?
a) Ectoderm b) Endoderm c) Mesoderm d) Placenta

42. Find out the A, B, C and D of human ovum.



a) A-Vitelline membrane	B-Zonapellucida	C-Corona radiata	D-Perivitelline
b) A-Acoronaradiata	B- Vitelline membrane	C-Preivitelline space	D-Germinal vesicle
c) A- Corona radiate	B-Zonapellucida	C-Vitelline membrane	D-Germinal vesicle
d) A-Outer theca externa	B-Inner theeainterna	C- Vitelline membrane	D-Ooplasm

43. Colostrum
(i) Nutrient rich fluid produced by the human female immediately after giving birth
(ii) It is loaded with immune growth and tissue repair factors
(iii) It is act as a natural antimicrobial agent to actively stimulate the maturity of he intent's immune system
(iv) Artificial feed can substitute the first milk
(a) (i) (ii) and (iii) (b) (i) (iii) and (iv) (c) (c) (i) (ii) and (iv) (d) (ii) (iii) and(iv)

44. Oxytocin causes_ reflex the actual ejection of milk from alveoli of the mammarygland
(a) Braxter – Hicks (b) Ferguson reflex (c) Foetal ejection (d) Let – Down-reflex

45. Which hormone helps in relaxation of the pelvi ligaments at the time of parturition?
(a) Parturition (b) Oestrogen (c) Both (a) and (b) (d) Relaxin

46. Colostrum is rich
(a) Ig A (b) Ig E (c) Ig M (d) Ig G

47. World Breast Feeding Week (WBW)
(a) August 1st week (b) Auguest 3rd week (c) October 1st week (d) October 3rd week

48. Which refers to the failure of spermatogenesis ?
(a) Zoospermia (b) Azoospermia (c) Oligospermia (d) None

49. The mature sperms are stored in the
a. Seminiferous tubules b.Vas deferens c. Epididymis d. Seminal vesicle

50. The male sex hormone testosterone is secreted from
a. Sertoli cells b. Leydig cell c. Epididymis d. Prostate gland

51. The glandular accessory organ which produces the largest proportion of semen is
a. Seminal vesicle b. Bulbourethral gland c. Prostate gland d. Mucous gland

52. The male homologue of the female clitoris is
a. Scrotum b. Penis c. Urethra d. Testis

53. The site of embryo implantation is the
a. Uterus b. Peritoneal cavity c. Vagina d. Fallopian tube

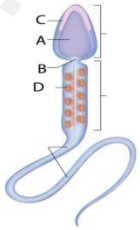
54. The foetal membrane that forms the basis of the umbilical cord is
a. Allantois b. Amnion c. Chorion d. Yolk sac

55. The most important hormone in initiating and maintaining lactation after birth is
a. Oestrogen b. FSH c. Prolactin d. Oxytocin

56 Mammalian egg is
a. Mesolecithal and non cleidoic b. Microlecithal and non cleidoic
c. Alecithal and non cleidoic d. Alecithal and cleidoic

57. The process which the sperm undergoes before penetrating the ovum is
a. Spermiation b. Cortical reaction c. Spermiogenesis d. Capacitation

58. Identify the parts labeled as A, B, C and D in the given diagram of human sperm and select the correct option.



a) Nucleus	Neck	Acrosome	Mitocondria
b) Acrosome	Neck	Nucleus	Mitocondria
c) Nucleus	Middle piece	Acrosome	Mitocondria
d) Nucleus	Neck	Middle piece	Mitocondria

59 The milk secreted by the mammary glands soon after child birth is called
a. Mucous b. Colostrum c. Lactose d. Sucrose

60. Colostrum is rich in
a. Ig E b. Ig A c. Ig D d. Ig M

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BEST WAY (ZOOLOGY)

HUMAN REPRODDUCTIVE HEALTH

(Chapter – 3 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 50
TIME : 45 Mins

1. Which represents a society with people having physically and functionally normal reproductive organ?
   a) Reproductive health b) Reproductive system
   c) Nerves and endocrine system d) All the above
2. Reproductive system
   (i) Complex system
   (ii) Controlled by neuro- endocrine system
   (iii) Important to take necessary steps to protect
   (iv) Not from infectious diseases
   a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (ii) (iii) and (iv) d) All the above
3. Family planning programme started at
   a)1961 b)1971 c) 1951 d)1857
4. Which technique is being often misused to determine the sex of the foetus?
   a) Ultrasound b) Foetoscope c) Both (a) and (b) d) Amniocentesis
5. Female foeticide refers to
   a) Aborting the female in the mother‘s womb
   b) Killing the female child after her birth
   c) Both (a) and (b)
   d) None
6. In UNDP’S GII (2018)- replaced that India was ranked at
   a)135 b) 155 c) 187 d) 197
7. PCPNDT means
   a) Prevention of Children from Sexual Offences
   b) Preconception and Diagbistic Technique
   c) Preconception and Prenatal Diagnostic Technique
   d) Preconception and Post Conception Technique
8. Which committee aims at creating a safe and secure envinment for both female and males?
   a) Verma Committee b) Justice Vermaz c) Both (a) and (b) d) None
9. According to a recent report from the on India’s population has already reached at
   a) 1.26 billion b) 1.26 million c) 1.62 billion d) 1.62 million
10. POCSO
    a) Preconception and Prenatal Diagnostic Technique
    b) Preconception and Diagbistic Technique
    c) Preconception and Post Conception technique
    d) Prevention of Children from Sexual Offences
11. Which one of the following oldest family planning method?
    (a) Lactational amenorrhoea (b) Continuous abstinence
    (c) Coitus interruptus (d) Periodic abstinence

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12 Diaphragms
(a) Female (b) Male (c) Both (a) and (b) (d) None of them

13. Given below statement, find out which one is True/False. About natural birth control methods

(i) **Periodic abstinence**- ovalation occur about 14th day ovam surries for about 2 days and sperm remains alive for about 72 hours – coitus is to be avoided during this time.

(ii) **Coitus interruptus** – is newly family planning method, the male partner withdraws is pen is before ejaculation.

(iii) **Continuous abstinence** is simplest and most reliable way to avoid pregnancy is not to have coitus for a define period that facilitated conception.

(iv) **Lactational amenorrhoea** – menstrual cycle resume as early as 6 to 8 weeks from parturition, the reappearance of normal ovarian cycle may be delayed for six months during breast feeding.

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

14 . Match column –I with column- II by choose the correct option about barrier method

COLUMN -I	COLUMN – II
(A) Chemical barrier	(i) Inserted by medical exports in uterus
(B) Mechanical barrier	(ii) Thickness the cervical fluid
(C) Hormonal barrier	(iii) Condoms thin sheath used to cover the penis
(D) Intrauterine devices	(iv) Melting suppositories, jellies that in active the sperms in the vegian

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

15. Saheli
(i) Contraceptive pills (ii) By Central Drug Research Institute in Luckown
(iii) Contains non-steroidal – Centchroman. (iv) It has success rate of 95 to 99 %
(a) (i) (ii) and (iii) (b) (i) (ii) and (iv)
(c) (ii) (iii) and (iv) (d) (i) (ii) (iii) and (iv)

16. Intrauterine systems (IUS)
(a) Copper releasing IUDs (b) Hormone-releasing IUDs
(c) Non-medicated IUDs (d) All the above

17. Which method is the surgical produce for male sterilisation?
(a) Tubectomy (b) Vasectomy (c) Diaphragms (d) Cervical cops

18. Which method is the surigical produce for female sterilisation?
(a) Tubectomy (b) Vasectomy (c) Diaphragms (d) Cervical cops

19. MTP
a) Medical Transfer Method b) Medical Fermination of Pregnancy
c) Assist Reproductive Technology d) Medical Reproductive Technology

20. Early Medical Termination is extremely safe up to
a) 12 Weeks b) 8 Weeks c) 3 Weeks d) 3 Months

21. Prevention of STD
(i) Avoid sex with unknown person (ii) Avoid sex multiple person
(iii) Use condoms (iv) Take antibiotics
a) (i) (ii) and (iii) b) (i) (iii) and (iv) c) (ii) (iii) and (iv) d) (i) (ii) and (iv)

22. Select the incorrect symptoms of diseases from the following.

(a) Candidiasis	–	Attacks intestinal track and vagina
(b) Chlamydiasis	–	Affects of columnar epithelium of urinogenital track
(c) Genital herpes	–	Cutaneous or mucosal genital damage
(d) Genital warts	–	Tumour on the external genitalia and cervix

23. Enlarges lymph modes prolonged fever, prolonged diarrhoea causes
(a) HIV (b) HSP (c) HBV (d) HPV

24. Cervical cancer causes
(a) HPV (b) HBV (c) HIV (d) PID

25. Lymphogranuloma venerum
(a) Swelling in the groin nodes
(b) Genitel elephantiasis
(c) Affect the cells columnar epithelium.
(d) Pain and pus discharge in the genital track

26. Match the column I and column II.

	COLUMN I	COLUMN II
A)	Syphilis	(i) 2 to21 days
B)	Hepatitis B	(ii) 2 to 3 weeks
C)	Chlamydiasis	(iii) 30 to 80 days
D)	Genital warts	(iv) 10 to 90 days

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

27. Inability to conceive or produce children even after unprotected sexual cohabitation called
(a) Infertility (b) Fertilization (c) Implementation (d) Fertility

28. Anorexia in women
(a) Fertility (b) Infertility (c) Growth (d) Pain

29. Varicocoele
(a) Undescended testes (b) Swollen vein (c) Both (a) and (b) (d) None

30. How many motile sperms are needed for each egg in IVF?
(a) 10,000 – 1,00,000 (b) 1,00,000 – 10,00,000
(c) 1,000 – 10,000 (d) 1,00,000 – 5,00,000

31. The first success of implantation technique was achieved in UK during
a) 1975 b) 1978 c) 1981 d) 1983

32. World AIDS Day
(a) 11th July (b) 1st December (c) 1st April (d) 1st August

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33. The technique in which the fertilized ova are introduced into the fallopian tube is called
a) GIFT b) IVF c) ECD d) IUD

34. Which method of embryos are created labe& transferred into the surrogate mother's uterus?
(a) TESE (b) IVT (c) IUI (d) IVF

35. TESE
(a) Micro – Testicular Sperm Extraction (b) Intra-Uterine Insemination
(c) Test Tube Baby (d) Assisted Reproductive Technology

36. Which one of the following groups includes sexually transmitted diseases caused by bacteria only?
(a) Syphilis, gonorrhoea and candidiasis
(b) Syphilis, chlamydiasis and gonorrhoea
(c) Syphilis, gonorrhoea and trichomoniasis
(d) Syphilis, trichomoniasis and pediculosis

37. Identify the correct statements from the following
(a) Chlamydiasis is a viral disease.
(b) Gonorrhoea is caused by a spirochaete bacterium, *Treponema palladium*.
(c) The incubation period for syphilis is is 2 to 14 days in males and 7 to 21 days in females
(d) Both syphilis and gonorrhoea are easily cured with antibiotics

38. The approach which does not give the defined action of contraceptive is

(a)	Hormonal contraceptive	Prevents entry of sperms, prevent ovulation and fertilization
(b)	Vasectomy	Prevents spermatogenesis
(c)	Barrier method	Prevents fertilization
(d)	Intra uterine device	Increases phagocytosis of sperms, suppresses sperm motility and fertilizing capacity of sperms

39. Match column I with column II and select the correct option from the codes given below.

A. Copper releasing IUD	(i) LNG-20
B. Hormone releasing	(ii) Lippes loop IUD
C. Non medicated IUD	(iii) Saheli
D. Mini pills	(iv) Multiload-375

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

40. Which of the following is a hormone releasing Intrauterine Device (IUD)?
a) Multiload 375 b) LNG-20 c) Cervical cap d) Vault

41. Assisted reproductive technology, IVF involves the transfer of
a) Ovum into the fallopian tube
b) Zygote into the fallopian tube
c) Zygote into the uterus
d) Embryo with 16 blastomeres into the fallopian tube

42. Burning sensation during urination
(a) Syphilis (b) Gonorrhoea (c) Genital herps (d) Genital warts

43. Liver cirrhosis and liver failure occur in
(a) HIV (b) AIDS (c) HBV (d) HPV

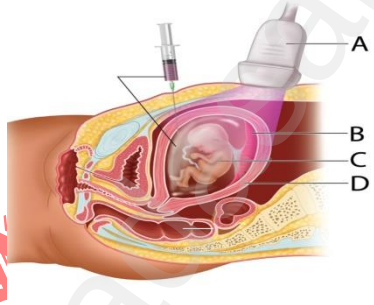
44. TNHSP
(a) Tamil Nadu Health Project (b) Tamil Nadu Health Scheme
(c) Tamil Nadu Health Systems Project (d) Tamil Nadu Health Organization

45. According to WHO, how many people are globally acquireds a sexually transmitted infection every day?
a) More than one million b) Less than one million
c) One million d) One trillion

46. Symptoms fo Trachoma
(a) Gonorrhoea (b) Syphills
(c) Chlamydiasis (d) Lympho granuloma venarium

47. What are the most common symptoms and signs of cervical cancer?
(a) Pelvic pain (b) Increased veginal discharge
(c) Abnormal vaginal bleeding (d) All of the above

48. Given below diagram , Identify the labeled A, B, C and D select the right option.



A	B	C	D
a) Ultrasound transducer	Placenta	Foetus	Uterus
b) Ultrasound transducer	Foetus	Placenta	Uterus
c) Amniotic fluid	Foetus	Placenta	Uterus
d) Amniotic fluid	Placenta	Foetus	Uterus

49. Modern screening techniques can detect by changes in the cervix
(a) Precancerous (b) Cancer (c) Both (a) and (b) (d) None

50. Which heavy metal ingestion leads to infertility?
(a) Calcium (b) Mercury (c) Cadmium (d) Iron

ALL THE BEST

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BEST WAY (ZOOLOGY)

STD : XII
SUB : BIO - ZOOLOGY

PRINCIPLES OF INHERITANCE AND VARIATION

(Chapter – 4 : One mark Test)

MARKS: 50
TIME : 45 Mins

1. Genetics is
   i) Branch of biology
   ii) Study of heredity and variations
   iii) Describe – how characteristic pass from parents to their off springs
   iv) Variation not occurs
   a) (i) (ii) and (iii) b) (i) (iii) and (iv)
   c) (ii)(iii) and (iv) d) (i) (ii) and (iv)
2. Which is the degree by which the progeny differs from their parents?
   a) Genetics b) Science c) Variation d) Biology
3. The inheritance of multiple alleles are called as
   a) Single alleles b) Multiple allelism c) Mutation d) None
4. Which method, the blood differs from person to person?
   a) Chemically b) Physically c) Biologically d) All the above
5. Who discovered two kinds of antigen called antigen 'A' and antigen 'B' on the surface of RBC's of human blood?
   a) Karl Landsteiner b) Bernestein c) Von De castelle d) Sturli
6. Who was discovered blood group 'AB'?
   a) Von De castelle b) Sturli c) Bernstein d) Both (a) and (b)
7. Which number of chromosome are concerned with the determination of blood group in any person?
   a) Chromosome 6 b) Chromosome 9 c) Chromosome 12 d) Chromosome13
8. Genes for blood group AB together are
   a) Dominant b) Co – dominant c) Recessive d) None
9. Which of the following approach does not give the defined action of blood allele?

BLOOD GROUPS	ENZYME
a) I^A	N- acetyl galactosamine
b) I^B	Galactosetransferase
c) I^O	No trasnferase
d) I^AI^B	Galactose to the precursor

10. Which of the following phenotypes is not possible in the progeny of the parental genotypic combination I^AI^O X I^BI^O ?
    a) AB b) O c) A d) B
11. How many phenotypes are possible in blood groups?
    a) Two b) Four c) Six d) Eight
12. Rh factor was first found in
    a) Rhesus Monkey b) Man c) Rabbit d) Mice
13. The term 'Rh factor' refers to
    a) Immunogenic D antigen b) Non – Immunogenic D antigen
    c) Only D antigen d) Antibody only

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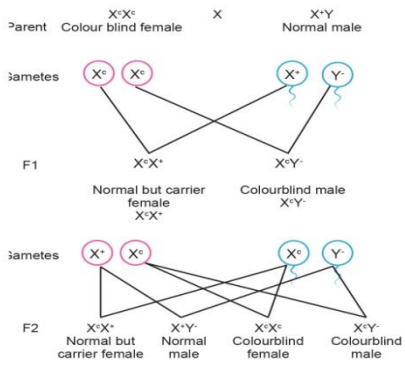
14. Below the flow chart define, Which type of diseases ?



a) Inheritance of X-Linked gene b) Inheritance of Y- linked gene
c) Both (a) and (b) d) None

15. Which sex chromosome may be dissimilar in one sex?
a) Homomorphic b) Heteromorphic c) Both (a) and (b) d) None

16. Which statement is correct about the Fisher and Race hypothesis?
i) Rh factor involves three different pairs of alleles located on three different closely linked loci on the chromosome pair
ii) This system is more commonly in use today and uses the 'C de' nomenclature.
iii) All genotype carrying a dominant 'D' allele will produce Rh^+ positive, recessive genotype 'dd' will give rise to Rh^- negative phenotype
iv) He proposed the existence of eight alleles at a single Rh locus
a) (i) (iii) and (iv) b) (i) (iii) and (iv)
c) (i) (ii) and (iii) d) (ii) (iii) and (iv)

17. **Assertion (A) :** Erythoblastosisfoetalis.
Reason (R): Second birth mother carry Rh – positive children, mother Rh antigen are carried across the placenta into foetal circulation.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

18. XX-XO type of sex determination is seen in
a) Bugs b) Cockroach c) Grasshopper d)All the above

19. The NRY is divided equally into function genes ---------
a) Euchromatic b) Heterochromatic c) Pseudochromatic d) All the above

20. Match the Column –I and Column –II

COLUMN –I	COLUMN –II
A) PAR	(i) Tests determining factors
B) NRY	(ii) Sex determining region Y
C) SRY	(iii) Non – combining region X
D) TDE	(iv) Pseudoautosomal region

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

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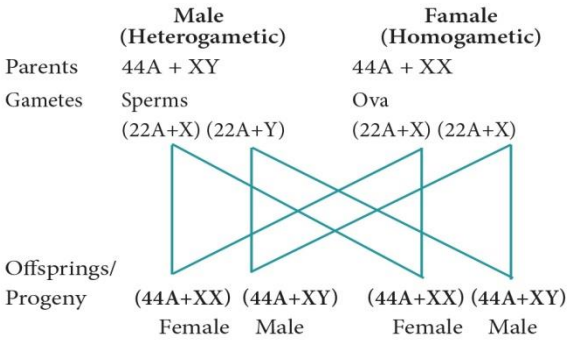
21. Which have barr body?
a) XO female b) XX female c) XXY males d) YO males

22. Flow chart represented by



a) Sex determination of honey bee b) Sex determination of human
c) Sex determination of Drosophila d) Sex determination of Birds

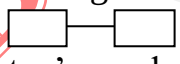
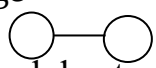
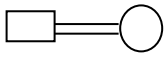
23. Haemophilia is more common in males because it is
a) Recessive character carried by Y Chromosome
b) Dominant character carried by Y Chromosome
c) Dominant trait carried by X Chromosome
d) Recessive trait carried by X Chromosome

24. When normal visioned man marries a colour blind women?
a) All sons will be normal visioned b) All daughter will be colour blind
c) All sons will be colour blind d) All children will be colour blind

25. Which substance to arrest cell division at metaphase stage in mitosis ?
a) Colchicine b) Clochitonine c) Both (a) and (b) d) Proteases

26. Karyotyping
i) Technique through which a complete set of chromosomes is separated from cell.
ii) Chromosomes are arranged in pair.
iii) An ideogram refers to a diagrammatic representation of chromosomes.
a) (i) b) (i) and (ii) c) (ii) and (iii) d) All the above

27. **Assertion (A) :** Colour blindness and haemophilia are sex linked inheritance.
Reason (R) : Colour blindness and haemophilia are X linked recessive traits.
a) If both A and R are true and R is correct explanation for A
b) If both A and R are true but R is not correct explanation for A
c) If A is true but R is false
d) If both A and R are false

28. Consanguineous marriage
a)  b)  c)  d) 

29. Patau's syndrome is caused due to
a) Meiotic disjunction b) Mitotic disjunction
c) Meiotic non disjunction d) Mitotic non disjunction

30. Which one is most common type of thalassemia?
a) Anaemia b) Cooley's anaemia
c) Alpha thalassemia d) Beta thalassemia

31. Match the column -I and column –II about Mendelian disorder.

COLUMN –I	COLUMN –II
A) Thalassemia	i) Autosomal dominant
B) Phenylketouria	ii) In born error of metabolism
C) Albinism	iii) Inborn error of phenylalanine
D) Huntington's chorea	iv) Excessive destruction of RBC's

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

32. **Assertion (A) :** Trisomic condition of chromosome – 21 result in Down's syndrome
Reason (R) : Mitotic (or) meiotic non disjunction of set chromosomes causes allosomal abnormalities.
a) If both A and R are true and R is correct explanation for A
b) If both A and R are true but R is not correct explanation for A
c) If A is true but R is false
d) If both A and R are false

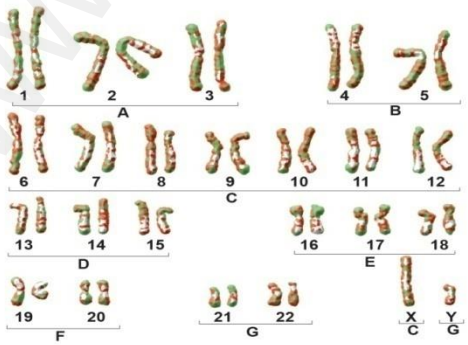
33. Which disease characterised by severe mental retardation, light pigmentation of skin and hair?
a) Huntington's chorea b) Albinism
c) Phenylketonuria d) Thalassemia

34. Melanin pigment present in
a) Skin b) Hair c) Iris d) All the above

35. Trisomic condition of chromosome -21 result in
a) Down's syndrome b) Patau's syndrome
c) Klinefelter's syndrome d) Turner's syndrome.

36. Symptoms of Trisomy -13
a) Malformation of the brain and internal organs b) Sterile female
c) Rudimentary gonads lack of menstrual cycle. d) Sterile males

37. Karyotype technique was described by



a) James Watson and Francis Crick b) Fraenkel – Conrat and Singer
c) Hershy – Chase d) Tjio and Levan

38. Klinefelter's symptoms
a) High pitched voice b) Long limbs c) Obese d) All the above

39. A human female with Turner's syndrome
    a) 45 chromosomes(44 autosomes and one X chromosome)
    b) Has one additional X chromosome.
    c) 45 chromosome with XXY
    d) 47 chromosome (44mAA + XXY)
40. Haemophilia is more common in males because it is a
    a) Recessive character carried by Y-chromosome
    b) Dominant character carried by Y-chromosome
    c) Dominant trait carried by X-chromosome
    d) Recessive trait carried by X-chromosome
41. Three children of a family have blood groups A, AB and B. What could be the genotypes of their parents?
    a) $I^AI^B$and ii b)I^A $I^O$and I^BI^O c) I^B $I^B$and I^A I^A d) I^A $I^A$and ii
42. If the childs blood group is 'O' and fathers blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be
    a) I^A IAand I^B I^O b) I^A Ioand I^B I^O c) I^A I^o and I^OI^O d) $I^OI^O$and I^B I^B
43. Who is the founder of Modern Eugenics movement?
    a) Mendel b) Darwin c) Fransis Galton d) Karl pearson
44. Which one of the following symbols and its representation, used in human pedigree analysis is correct?
    a) □=○=Mating between relatives b) ○=Unaffected male
    c) □=Unaffected female d) ◊=Male affected
45. Select the correct match.

a) Haemophilia	-	Y linked
b) Phenylketonuria	-	Autosomal dominantrait
c) Sickle cell anaemia	-	Autosomal recessive trait, chromosome-11
d) Thalassemia	-	X linked

46. Which of the following conditions cause erythroblastosis foetalis?
    a) Mother Rh^{+ve} and foetus Rh^{-ve} b) Mother Rh^{-ve} and foetus Rh^{+ve}
    c) Both Mother and foetus Rh^{+ve} d) Both Mother and foetus Rh^{-ve}
47. In a population of 1000 individuals 360 belong to genotype AA, 480 to Aa and the remaining 160to aa, Based on this data, the frequency of allele A in the population is
    (a) 0.4 (b) 0.5 (c) 0.6 (d) 0.7
48. Klinefelter's syndrome is characterized by a karyotype of
    a) XYY b) XO c) XXX d) XXY
49. Which of the following is true about Rh factor in the offspring of a parental combination Dd X Dd (both Rh positive)?
    a) All will be Rh-positive b) Half will be Rh positive
    c) About ¾ will be Rh negative d) About one fourth will be Rh negative
50. Which of the following phenotypes is not possible in the progeny of the parental genotypic combination I^AI^O X I^AI^B ?
    a) AB b) O c) A d) B

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BEST WAY (ZOOLOGY)

MOLECULAR GENETICS

(Chapter – 5 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 60
TIME : 45 Mins

1. Which theory dispelled the mystery of traits seemed to appear and disappear magically from one generation to the next?
   (a) Lamarks's theory (b) Darwain's theory
   (c) Mendel's theory (d) All the above
2. Genome
   (i) Long sequence of nucleic acids of a that provide the information needed to construct the organism
   (ii) Complete set of hereditary information for any organism
   (iii) May be divided into number of different nucleic acid may contain large number of genes
   (iv) Genome sequence within the nucleic acid that represents a single protein
   (a) (i) (ii) and (iii) (b) (i) (ii) and (iv) (c) (ii) (iii) and (iv) (d) (i) (iii) and (i)
3. The concept of gene was first explained in
   (a) 1860's (b)1900's (c) 1940's (d) 1910's
4. Who was coined by the term "gene" ?
   (a) Gregormendel (b) George Beadle
   (c) Altman (d) Wilhelm Johannsen
5. One gene-one enzyme hypothesis
   (a) George Beadle (b) Edward Tatum (c) Both (a) and (b) (d) Colin Macleod
6. Match the columns and find the correct options:-

COLUMN I	COLUMN II
A. Wilhelm Hofmeister	(i) 1909
B. Friedrish Miescher	(ii) 1920
C. Griffith	(iii) 1869
D. Wilhelm Johannsen	(iv) 1848

   (a) A-(iv) B-(iii) C-(ii) D –(i) (b) A-(iv) B-(iii) C-(ii) D –(i)
   (c) A-(iv) B-(iii) C-(ii) D –(i) (d) A-(iv) B-(iii) C-(ii) D –(i)
7. Hershey and Chase experiment on
   (a) Neurosporacrassa (b) T_2 – bacteriophage
   (c) Escherichia coli (d)All the above
8. Thymine is unique for
   (a) DNA (b) RNA (c) Both (a) and (b) (d) mRNA
9. Phosphodister bond indicating the polarity of
   (a) 5'→ 3' (b) 3'→ 5' (c) 5'only (d) 3'only
10. The genetically modified DNA fragments are called as
    (a) Plasmid DNA (b) Recombinant DNA (c) Both (a) and (b) (d) None
11. Which should be able to express itself in the form of "Mendailian characters" ?
    (a) Information storage (b) Stability
    (c) Variation through mutation (d) Self – replication

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12. Which one is not true?
(a) A=T, G=C (b) A=G, T-C (c) C=G ,A (d) G=C, A=T

13. The term " RNA World " first used by
(a) Leslin Orgel (b) Francis brick (c) Carl Woese (d) Walter Gibert

14. The length of E.coli DNA is
(a) 0.136 mm (b) 1.36mm (c) 13.6mm (d) 136 mm

15. Read the following assertion and reason and select the correct answer.
Assertion (A) : Nucleosome
Reason (R) : The negative charged DNA is wrapped ground the positively charged histone octamere to form a structure.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

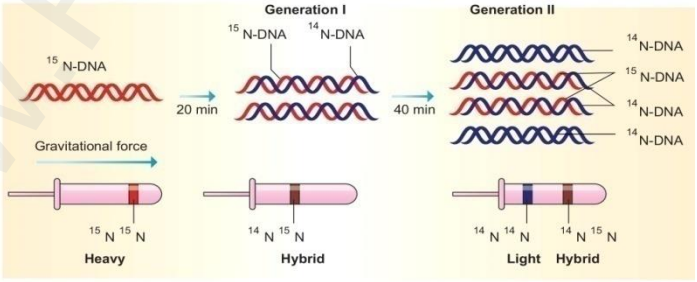
16. Which replication , the original double helix serves as a template ?
(a) Conservative replication (b) Dispersive – replication
(c) Semi – conservative replication (d) All the above

17. DNA replication in bacteria occurs
(a) During S phase (b) Within nucleous
(c) Prior to fission (d) Just before transcription

18. In the experiment conducted by Meselson and Stahl using heavy ^{15}N to prove semi-conservative model of DNA, the first generation was found
(a) ^{14}N only (b) ^{15}N only (c) ^{14}N and ^{15}N (d) ^{15}N and ^{16}N

19. Replication begins at the initiation called the side of
(a) Ori (b) Okazaki fragments (c) Promoter (d) Terminator

20. Find out the below experiments support semiconservative mode of DNA replication?



a) James Watson and Francis Crick b) Marshall Nirenberg and Sever Ochoa
c) Meselson and Stah d) Maurice Wilkins and Rosalind Franklin

21. Which strand (template strand with polarity) the replication is continuous and known ?
(a) Leading strand (b) Lagging Strand
(c) Okazaki fragments (d) All the above

22. Who proposed the central dogma in molecular biology ?
(a) Griffith (b) Francis Crick (c) Friedrish Miescher (d) Martha Chase

23. Given below statement find out which one is True /False
(i) The core enzyme (β1,β,α) is responsible for RNA synthesis
(ii) Sigma subunit is responsible for recognition of the promoter
(iii) RNA polymerase open up the RNA to form the transcription bubble
(iv) The end of a gene is marked by a terminator sequence that forms a hair pin structure in the DNA

	(i)	(ii)	(iii)	(iv)
(a)	True	False	True	False
(b)	False	True	False	True
(c)	True	True	False	False
(d)	False	False	True	True

24. RNA is the genetic material in
a) Fungs b) Bacteris c) TMV d) E coli

25. Read the following assertion and reason and select the correct answer.
Assertion (A) : Introns
Reason (R) : In eukaryotes, the monocistroic structural genes have interrupted non coding sequences
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

26. Which hypothesized to have played a major role in the evolution of life on Earth?
a) HGT b) HGP c) YAC d) BAC

27. The smallest RNA is
a) mRNA b) tRNA c) rRNA d)Rh RNA

28. Genetic code was discovered by
a) Nirenberg and Mathaei b) Nirenberg and Holley
c) Holley and ochoa d) Holley, Nirenberg and Khorana

29. Which codon are designated as termination codons and also are known as 'non – sense' codons?
a) UAA b) UAG c) UGA d) All the above

30. Match the column I and column II about the genetic code:

COLUMN I	COLUMN II
A. UUC	i. Leucine
B. UUA	ii. Serine
C. UCC	iii. Phenylalanine
D. UAU	iv. Tyrosine

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

31. Which of the following is correct pair
a) AAA – Asparagine b) UUU – Leucine
c) CCC – Histidine d) GGG – Glycine

32. UAA, UAG and UGA codons are designated codons are known as
a) Start codon b) Non – sense c) Triplet codon d) None

33. The relationship between genes and DNA are best understood by ____ studies
a) Translation b) Genetic code c) Transcription d) Mutation

34. Wobble hypothesis was proposed by
a) Holley b) Nirenberg c) Khorana d) Crick

35. The Wobble effect is the
a) Lack of precision with regared to the third base of anticodon and codon
b) Instability of the DNA molecule when unwound
c) Instability of pairing when a purine pair with another purine
d) Undulating movements of mRNA

36. The tRNA arms have loops such as
a) Amino acid binding loop b) Anticodon loop
c) Ribosomal binding loop d) All the above

37. tRNA recognizes aminoacyl synthetase enzyme by
a) Anticodon b) DHU loop c) TUC loop d) AA site

38. Polypeptide chain in eukaryotes in initiated by
a) Methionine b) Glycine c) Leucine d) Lysine

39. Which of the following rRNA acts as structural RNA as well as ribozyme in bacteria?
a) 5 s rRNA b) 18 s rRNA c) 23 s rRNA d) 5.8 s rRNA

40. In translation ribosome binding site is called as
a) Shine – Dalgarno Sequence b) Translation sequence
c) Trnscription sequence d) None

41. Translation occurs
a) Initiation b) Elongation c) Termination d) All the above

42. **Statement I :** In prokaryotic translation is to position the ribosome to form hydrogen bonds between its anticodon and the second codon on the mRNA
Statement II: This step requires the correct transfer RNA another GTP and two proteins called elongation factors
(a) Both statement I &II are correct
(b) Statement I is correct, statement II is incorrect
(c) Statement I is incorrect, statement II is correct
(d) Both statement I &II are incorrect

43. Lac operon is
a) Arabinose operon b) Repressible operon
c) Inducible operon d) Overlapping genes

44. Which enzymes brings about hydrolysis of lactose to glucose and galactose transfer?
a) β – galactosidase b) Permease
c) Transacetylase d) Aminoacyl synthesis

45. Human genome is said to have approximately
a) 2×10^9 bp b) 3×10^9 bp c) 4×10^9 bp d) 2.5×10^9 bp

46. Match the column I and column II about Lac operon of structural genes and codes.

COLUMN – I	COLUMN – II
A. Lac Z	(i) Transacetylase
B. Lac Y	(ii) β – galactosidase
C. Lac A	(iii) Permease

a) A – (i) B – (ii) C – (iii) b) A – (ii) B – (iii) C – (i)
c) A – (iii) B –(ii) C – (i) d) A – (ii) B – (i) C – (iii)

47. Which enable formation of all the required enzymes needed for lactose metabolism?
a) Lac mRNA b) Lac tRNA c) Lac rRNA d) Lac DNA

48. Largest gene in human is
a) Dystrophin b) Insulin gene c) Oncogene d) β - globin + haemoglobin

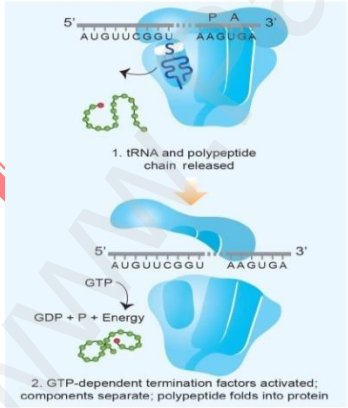
49. The DNA finger printing technique was first developed by
a) Meselson b) Alec Jeffreys c) Avery d) Altman

50. In centrifugation,the bulk DNAforms major peak and the other small peaks are referred to as
a) Repetitive DNA b) Satellite DNA
c) Isolation of DNA d) Transferring

51. In DNA finger printing
a) A positive identification can be made
b) A gel blot is all that is required
c) Multiple restriction digests generate unique fragments
d) The polymerase chain reaction amplifies finger DNA

52. Hershey and Chase experiment with bacteriophage showed that
a) Protein gets into the bacterial cells b) DNA is the genetic material
c) DNA contains radioactive sulphur d) Viruses undergo transformation

53. Refer to the given diagram, for translated, Which codon present the "S" ?



a) GGV b) UUG c) UGA d) AAG

54. A mRNA molecule is produced by
a) Replication b) Transcription
c) Duplication d) Translation

55. The total number of nitrogenous bases in human genome is estimated to be about
a) 3.5 million b) 35000 c) 35 million d) 3.1 billion

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56. The first codon to be deciphered was _____ which codes for _____.
(a) AAA, proline (b) GGG, alanine
(c) UUU, Phenylalanine (d)TTT, arginine

57. An operon is a:
(a) Protein that suppresses gene expression
(b) Protein that accelerates gene expression
(c) Cluster of structural genes with related function
(d) Gene that switched other genes on or off

58. The Okazaki fragments in DNA chain growth
a) Result in transcription
b) Polymerise in the 3' to 5' direction and forms replication fork
c) Prove semi- conservative nature of DNA replication
d) Polymerises in the 5' to 3'direction and explain 3' to 5' DNA replication

59. Reverse transcriptase is
a) RNA dependent RNA polymerase b) DNA dependent RNA polymerase
c) DNA dependent DNA polymerase d) RNA dependent DNA polymerase

60. Escherichia coli fully labeled with N14 medium. The two strands of DNA molecules of the first generation bacteria have
a) Different density and do not resemble parent DNA
b) Different density but resemble parent DNA
c) Same density and resemble parent DNA
d) Same density but do not resemble parents DNA

ALL THE BEST

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BEST WAY (ZOOLOGY)

STD : XII | **EVOLUTION** | **MARKS: 60**

SUB : BIO - ZOOLOGY | **(Chapter – 6 : One mark Test)** | **TIME : 45 Mins**

1. Which of the following contains kinds of evolution?
   a) Chemical b) Organic c) Social d) All the above
2. Radiometric dating of meteorites yields an estimated age for the solar system and for earth as around
   a) 3.5 – 3.6 billion years b) 4.4 – 4.6 million years
   c) 4.5 – 4.6 billion years d) 4.5 – 4.6 million years
3. Read the following assertion and reason and select the correct answer.
   Assertion : At first Earth was too hot.
   Reason : Because the collisions of the planeteismals that coalesced to form earth
   a) If both assertion and reason are true but reason is correct explanation for assertion
   b) If both assertion and reason true but reason is not the correct explanation for assertion
   c) If assertion is true but reason is false
   d) If both assertion and reason are false
4. Abiogenesis coined by
   a) Henry Bastian b) Thomas Hutley c) Haldane d) Oparin
5. Which states that life was created by a supernatural power respectfully referred to as“GOD” ?
   a) The theory of spontaneous generation b) Abiogenesis
   c) Big bang theory d) Theory of special creation
6. The primitive earth had no proper atmosphere but consisted of
   (i) Ammonia, methane, hydrogen and water vapour.
   (ii) The climate of the earth was extremely high.
   (iii) UV rays from the sun split up water molecules into hydrogen and oxygen
   (iv) Gradually the temperature cooled and the water vapour condensed to form rain.
   (v) Rain water filled all the depression to form water bodies.
   a) (i) (ii) (iii) and (iv) b) (i) (ii) (iii) and (v)
   c) (i) (ii) (iii) (iv) and (v) d) (i) (ii) and (iv)
7. Given below statement find out which one is True / False about Coacervates.
   (i) Large colloidal particles that precipitate out in aqueous medium.
   (ii) First pre-cells which gradually trams formed into living cells
   (iii) Coacervates were able to absorb & assimilate organic compounds form the environment
   (iv) Coacervates were coined the term Operon - Haldane

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

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8. Haldane coined the term
a) Prebiotic soup b) Biotocsoup c) First living cell d) All the above

9. Match the column 1 and column 2.

	COLUMN 1	COLUMN 2
A	Abiogenesis	i) Organic compounds
B	Biogenesis	ii) Prebiotic soup
C	Haldane	iii) Henry Bastian
D	Oparin	iv) Thomas Huxley

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

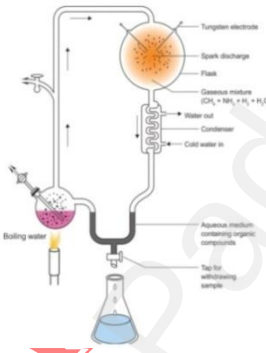
10. Monera are considered as ancestral to the modern
a) Bacteria b) Blue green alage c) Both (a) and (b) d) Viruses

11. Urey and Miller experiment, a mixture of gases was allowed to circulate over electri discharge from an
a) Tungsten electrode b) Tungsten node c) Tungsten pin d)None

12. Which study of prehistoric life through fossils ?
a) Embryology b) Paleontology c) Entomology d) All the above

13. Which lived 22 thousand years ago were preserved in the frozen coast of Siberia ?
a) Penguins b) Dolphins c) Woolly Mammoth d) Octopus

14. Find out the experiments.



a) Haldane experiment b) Urey-Miller's experiments
c) Oparin and Haldane d) Charles Darwin experiments

15. Actual remains
(i) The original hard parts such as bones, teeth or shells are preserved as such in the Earth's atmosphere
(ii) Marine animal die, their hard parts such as bone, shell are covered from further deterioration, get preserved in vast ocean, the salinity in them prevents decay
(iii) The sediments become hardened to form definite layers or strata
(iv) If is the most common method of fossilization
a) (i) (ii) and (iii) b) (i) (ii) and (iv)
c) (ii) (iii) and (iv) d) (i) (ii) (iii) and (iv)

16. Which ancient city several human beings and animals living in the preserved intact by volcanic ash out from mount Vesuvius
a) Siberia b) Pompeii c) Both (a) and (b) d) None

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17. Which hardened faecal matter occur as tiny pellets?
a) Moulds b) Coprolites c) Casts d) All the above

18. Structures which are similar in organ but perform different function are called as
a) Analogous structures b) Homologous structures
c) Vestigial organs d) Atavistic organ

19. Homologous structures that brings about
a) Convergent evolution b) Divergent evolution
c) Vestigial organ d) Atavistic organ

20. Thorn of Bougaivilles is used as a
a) Defence mechanism b) Support of climbing c) Both (a) and (b) d) None

21. Match the column –I and column –II above comparative anatomy of evolution.

	COLUMN-I	COLUMN-II
A	Homologous	i) Tail
B	Analogous	ii) Caecum
C	Vestigial organ	iii) Flipper
D	Atavistic organ	iv) Fore limbs

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

22. Eye of octopus and mammals and flipper of Penguins and Dolphins are
a) Atavistic organs b) Vestigial organ
c) Homologous structures d) Analogous structure

23. Vermiform appendix is
a) Atavistic organs b) Vestigial organc) Homologous organ d) Analogous organ

24. Which pair is correct ?
a) Reptiles and Human – Archaeopteryx b) Annelida and Arthropoda – Peripatus
c) Apes and Man - Ramapithecus d) Fishes and Repticles – Penguins

25. Sudden appearance of vestigial organ in highly evolved organism is called as
a) Vestigial organ b) Atavistic organ
c) Homologous organ d) Analogous organ

26. How many chambered heart in crocodiles?
a) Two b) Three c) Four d) Thirteen

27. Which is sequenced during study of phylogeny?
a) mRNA b) rRNA c) tRNA d) DNA

28. Which evolution is the process of change in the sequence composition of molecules such as DNA, RNA and protein across generations?
a) Micro evolution b) Molecular evolution
c) Macro evolution d) All the above

29. Jean Baptiste de Lamarck was the first to postulate, the theory of evolution in famous book
a) The orgin of species by natural selection b) Philosophie Zoologique
c) Both (a) and (b) d) The origin of species by Natural selection

30. Charles Darwin explained the theory of evolution in his book
a) The origin of species by Natural selection b) Philosophie Zoologique
c) Both (a) and (b) d) None

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31. Read the following assertion and reason choose the correct answer about the Lamarck'stheory
Assertion : The theory of use and disuse
Reason : Organs that are used often will increase in size and those that are not used will degenerate
a) If both assertion and reason are true but reason is correct explanation for assertion
b) If both assertion and reason true but reason is not the correct explanation for assertion
c) If assertion is true but reason is false
d) If both assertion and reason are false

32. Elephant
(i) The slowest breeder
(ii) Can produce six young ones in its life time
(iii) Can produce 6 million descendants at the end of 750 years (absence any check)
(iv) Not for prodigality of production
a) (i), (ii) and (iv) b) (i), (iii) and (iv) c) (ii), (iii) and (iv) d) (i), (ii) and (iii)

33. Darwin compared origin of species by natural selection to a
a) Large isolated group b) Small isolated group c) Both (a) and (b) d) None

34. Darwin judged the fitness of individual through
a) Ability to defend b) Strategy for obtaining food
c) Number of offspring d) Dominance over others

35. Sudden and large variations were responsible for the origin of new species by
a) Hugo de Varies b) Lamarck c) Darwin d) Both (a) and (b)

36. Which refers to changes in the structure of chromosomes due to deletion, addition, duplication, inversion or translocation?
a) Gene mutation b) Chromosomal mutation
c) Genetic recombination d) Natural selection

37. Which is due to crossing over of genes during meiosis?
a) Gene mutation b) Chromosomal mutation
c) Genetic recombination d) Natural selection

38. Which helps in preventing interbreeding between related organisms?
a) Genetic recombination b) Natural selection
c) Reproductive isolation d) All the above

39. Industrial melanism is clear through
a) Artificial selection b) Natural selection c) Osilation d) All the above

40. Industrial melanism is a classical case natural selection exhibited by
a) Arucheopteryx b) Peripatus c) Peppered moth d) Woolly Mammoth

41. Best examples for adaptive radiation
a) Darwin's Finches b) Australian Marsupials c) Both (a) and (b) d) None

42. Which gene in the DNA of genetic variation associated with in the beak shape?
a) ALX b) ALX1 c) ALX3 d) ALY1

43. Marsupials and placental mammals were separated from the common ancestor more than
a)100 million years ago b) 50 million years ago
c) 10 million years ago d) 5 million years ago

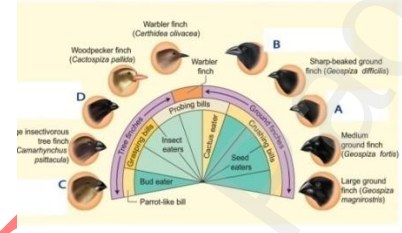
44. Which type of selection operates in a stable environment?
a) Stabilizing selection b) Directional selection
c) Disruptive selection d) All the above

45. Read the following assertion and reason, find out the correct answer
Assertion : Evolution
Reason : Does not mean that the population is moving towards perfection rather the population is changing its genetic makeup over generations.
a) If both assertion and reason are correct and reason is the correct explanation of the assertion
b) If both assertion & reason are correct and reason is not correct explanation of the assertion
c) If assertion is correct but reason is incorrect
d) If both assertion and reason incorrect

46. "Golden age of Reptiles"
a) Precambrian b) Paleozoic c) Mesozoic d) Cenozoic

47. The phenomenon of " Industrial Melanism" demonstrates
a) Natural selection b) Induced mutation
c) Reproductive isolation d) Geographical isolation

48. Find out the Darwin's finches. A, B, C and D.



A	B	C	D
a) Geospiza fuliginosa	Geospiza scandens	Platyspiza crassirostris	Camarhynchus parvulus
b) Certhidea olivocea	Geospiza difficilis	Geospiza fortis	Camarhynchu speitacula
c) Camarhynchus parvulus	Geospiza scandens	Geospiza fortis	Cactospiza pallida
d) Geospiza fuliginosa	Geospiza scandens	Platyspiza crassiorstrio	Camargynchus psittacula

49. Movement to genes through gametes or movement of individuals in (immigration) and out (emigration) of a population is referred to as
a) Gene chart b) Gene flow c) Genetic drift d) Sewall Wright ffect

50. Select Hardy – Weinberg equation
a) $2(p+q)^2 = p^2+4pq+q^2$ b) $P^2+q^2=2p+pq+q^2$
c) $(p+q)^2=p+2pq+q^2$ d) $(p+q)^2=p^2+2pq+q^2$

51. Origin of first mammals occurred
a) 500 million years b) 220 million years
c)1600 million years d) Over 1600 million years

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52. Australopithecus
(i) Lived in East African grassland (ii) About 5 million years ago
(iii) He was called as Ausstralian ape man (iv) He was about 2.5 meters tall
a) (i), (ii) and (iv) b) (ii), (iii) and (iv)
c) (i), (iii) and (iv) d) (i), (ii) and (iii)

53. The correct sequence in the evolution of modern man

a) Dryopithecus - Australopithecus - Homo habilis - Homo erectus - Homo sapiens
b) Australopithecus - Dryopithecus - Homo habilis - Homo erectus - Homo sapiens
c) Homo habilis - Dryopithecus - Australopithecus - Homo erectus - Homo sapiens
d) Dryopithecus - Homo habilis - Australopithecus - Homo erectus - Homo sapiens

54. Match the column I and II about Ear and years in million.

COLUMN I	COLUMN II
A) Paleozoic	(i) 100 – 1
B) Mesozoic	(ii) 180 – 125
C) Cenozoic	(iii) 510 - 205

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

55. Who proposed the Germplasm theory?
a) Darwin b) August Weismann c) Lamarck d) Alfred Wallace

56. Which period was called "Age of fishes" ?
a) Permian b) Triassic c) Devonian d) Ordovician

57. The correct order in Era is
a) Palaeozoic-- Archaeozoic --- Coenozoic
b) Archaeozoic ---Palaeozoic-Proterozoic
c) Palaeozoic--- Mesozoic ----- Coenozoic
d) Mesozoic ---- Archaeozoic---- Proterozoic

58. Which one of the following options gives one correct example each of convergent evolution and divergent evolution ?

CONVERGENT EVOLUTION	DIVERGENT EVOLUTION
(a) Bones of forelimbs of vertebrates	Wings of butterfly and birds
(b) Thorns of Bougainvillia and tendrils of curbita	Eyes of Octopus and mammals
(c) Eyes of octopus and mammals	Bones of forelimpbs of vertebrates
(d) Thorns of Bougainvillia & tendrills of curbita	Wings of butterflies and birds

59. Modern man belongs to which period ?
a) Quaternary b) Cretaceous c) Silurian d) Cambrian

60. The Neanderthal man had the brain capacity of
a) 650 – 800cc b) 1200cc c) 900cc d) 1400cc

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BEST WAY (ZOOLOGY)

STD : XII | **HUMAN HEALTH AND DISEASES** | **MARKS: 60**

SUB : BIO - ZOOLOGY | **(Chapter – 7 : One mark Test)** | **TIME : 45 Mins**

1. Human Health is
(i) In creases longevity
(ii) Reduces infant and adult mortality
(iii) Personal hygiene, regular exercise and balanced diet- very import
(iv) Merely presents of disease
a) (i) (ii) and (iii) (b) (i) (ii) and (iv) (c) (i) (iii) and (iv) (d) (ii) (iii) and (iv)

2. Match the following the infectious agent to and disease

	COLUMN - I	COLUMN - II
A	Bacteria	(i) Kala-azar
B	Viral	(ii) Candidiasis
C	Fungal	(iii) Mumps
D	Protozoan	(iv) Diphtheria

a) (D) (C) (B) (A) b) (C) (B) (A) (D)
c) (B) (A) (D) (C) d) (A) (B) (C) (D)

3. Which of the following is degenerative diseases ?
(a) Arthritis (b) Heart attack (c) Stroke (d) All of the

4. Chikungunya belongs to
(a) Viral (b) Fungal (c) Protozoan (d) Bacterial

5. Find out the bacterial diseases
(a) Dysentery, cholera, typhoid, pneumonia
(b) Dysentery, diphtheria, mumps, measles
(c) Chickunganya, common, cold, pneumonia,
(d)Athlete's food, candidiasis, dysentery

6. Match the bacterial disease cause the human beings

	COLUMN - I	COLUMN - II
A	Tuberculosis	(i) Corynebacterium disphtherie
B	Tetanus	(ii) Clostridium
C	Diphtheria	(iii) Mycobacterium tuberculosis
D	Cholera	(iv) Vibrio cholerae

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

7. Shigellosis
i) Bacillary dysentery
ii) It is transmitted food and water contaminated by faeces
iii) It site of infection larynx skin and nasal
iv) Causative agent is shigells species
(a) (i) (ii) and (iii) (b) (i) (ii) and (iv)
(c) (i) (ii) and (iv) (d) (ii) (iii) and (iv)

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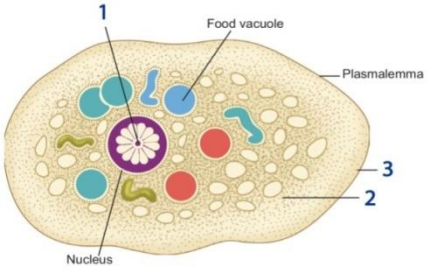
8. Read the following assertion and reason, find the corret answer.
Assertion (A): Measles are rubella virus (RNA Virus)
Reason (R) : Mode of infection by droplet infection and site of infection skin and respiratory track
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

9. Break bone fever causes
a) Dengu fever b) Chikungunaya c) Poliomyelitis d) Comman cold

10. African sleeping sickenss is caused by
a) Entamoeba histolytica b) Trypanosome species
c) Both (a) and (b) d) None

11. Identify the marking 1, 2, 3 in the diagram given below and select the correct option



1	2	3
a) Ectoplasm	Endoplasm	Endosoma
b) Ectoplasm	Endosoma	Endoplasm
c) Endosoma	Ectoplasm	Plasmalemma
d) Endosoma	Endoplasm	Ectoplasm

12. Kala azar is transmitted by
a) House flies b) Tsetse flies c) Anopheles d) Sand flies

13. Malaria is causes by
a) Plasmodium b) Amoebiasis c) HIV d) Rhino viruses

14. Schuffners granuces
a) Yellowish – brown pigment b) White – brown pigment
c) Greenish – brown pigment d) White-green pigment

15. Match column I and ii types of malarias and causative agent.

COLUMN-I (Types of Malaria)	CLOUMN-II (Causative agent)
Vivax malaria	P. falciparum
Quartan malaria	P. ovale
Mild tertian malaria	P.malaria
Maligant tertian	P.vivax

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

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16. Which fish feed on mosquito larvae?
(a) Catla (b) Gambusia (c) Both (a) and (b) (d) None

17. Which disease was recognized as a causative agentt of human diseases much earlier than bacteria ?
a) Fungal disease b) Viral diseases c) Helminthic disease d) Protozooms disease

18. Ascaris lumbricoides commonly called as
(a) Tape worm (b) Round worms (c) Pin worm (d) Earth worm

19. Find the below statement True / False about Ascaris
(i) Monogenic paradise and exhibits sexual dimorphism.
(ii) Cause by the intestinal of endparasite Ascaries lnmbricoides.
(iii) It is transmitted through ingestion of embryonated eggs though contaminated food and water
(iv) Children playing in contaminated soils are also prone to have a chance of transfer egg from hand to mouth.

	(i)	**(ii)**	**(iii)**	**(iv)**
a)	Ture	False	False	False
b)	Ture	Ture	False	False
c)	Ture	Ture	Ture	False
d)	Ture	Ture	Ture	Ture

20. Wuchereria bancrofti is
a) Oviparous b) Viviparous c) Ovoviparous d) None

21. Immunology
i) System protects an individual from various infective agents.
ii) It refers to all the mechanisms used by the body for protection from environmental agents that are foreign to the body.
iii) The overall ability of body to fight against the disease causing pathogen
iv) Immune system function efficiency in an individual, it leads to infection causing diseas.
a) (i) (ii) and (iii) b) (i) (iii) and (iv) c) (i) (ii) and (iv) d) (ii) (iii) and (iv)

22. Innate immunity is
a) Natural immunity b) Non specific
c) Both (a) and (b) d) Acquired immunity

23. The lack of immunity is known as ----------
a) Susceptibility b) Specility c) Ability d) None

24. **Assertion (A) :** Skin
Reason (R) : Prevents the entry of microbes
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

25. Which act as antibacterial agent ?
a) Infernos b) Lysozyme c) Both (a) and (b) d) None

26. Match the Column I with Column II and select the correct option from the given below.

COLUMN I	COLUMN II
A. Anatomical barriers	1. Serotonin
B. Physiological barriers	2. Monocytes
C. Phagocytic barriers	3. Temperature
D. Inflammatory barriers	4. Mucus membrane

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

27. Pathogens are destroyed by cells without production antibodies, then it is known as
a) Cell Mediated Immunity b) Cell Mediated Response
c) Antibody mediated immunity d) Both (a) and (b)

28. Antibody production is a characteristic feature only in
a) Invertebrates b) Vertebrates c) Urochorades d) Prochorades

29. Which immunity is acquired without the activation of person's immune response, andtherefore there is no memory ?
a) Active immunity b) Passive immunity
c) Humoral immunity d) Andibody immunity

30. Both B-cells and T-cells of immune system are produced in
a) Spleen b) Lymph nodes c) Bone marrow d) Thymus

31. The organ involved in the origin, maturation and proliferation of lymphocytes are called as.
a) Lymphoid system b) Lymphoid organ c) Immunity d) Immune response

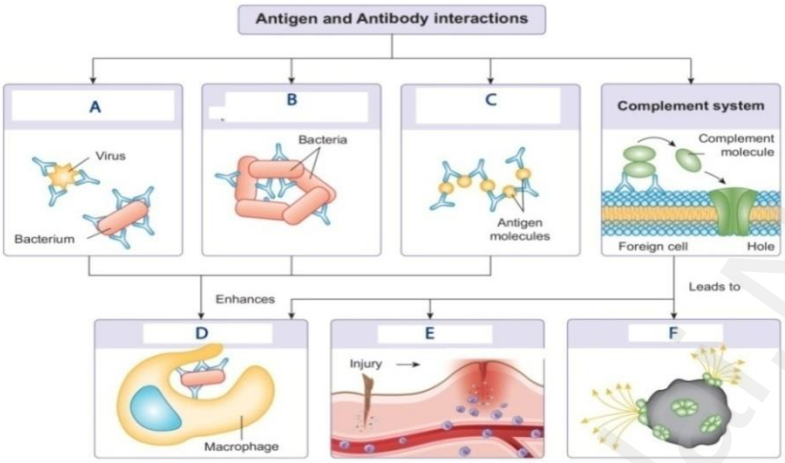
32. Thymus
i) Flant and bilobed organ located behind the sternum, above the heart.
ii) Two lobes each lobule are differentiated into outer cortex and inner medulla
iii) Outer cortex, is densely packed with immature B cells called thymocytes
iv) Main secretions is the horomone thymosin, stimulates the T cells to become mature and immunocometent.
a) (i) (ii) and (iii) b) (ii) (iii) and (iv) c) (i) (ii) and (iv) d) (i) (iii) and (iv)

33. Read the given statements and select the correct options.
Statement 1: Haematopoietic cells
Statement 2: Potential to multiply through cell division and remain as stem cells or different kinds of blood cells.
a) Both statement 1and2 are correct and statement 2 is correct explanation statement 1
b) Both statement 1 and 2 are correct but statement 2 is not the correct explanation statement1
c) Statement 1 is correct but statement 2 is in correct.
d) Both statement 1 and 2 are incorrect

34. How many number of red blood cells (per μ) in human adult ?
a) 42,00,000 to 62,00,000 b) 42,00,000 to 62,00,000
c) 52,00,000 to 62,00,000 d) 42,00,000 to 62,00,000

35. Lymph is
i) Clear transparent, colorless and mobile
ii) Extra cellular fluid, connective tissue
iii) It will be trapped by the phagocyte cells follicular cells
iv) Not percolates through brought in by the lymph node
a) (i) (ii) and (iii) b) (ii) (iii) and (iv) c) (i) (ii) and (iv) d) (i) (iii) and (iv)

36. Find out the antigen and antibody interaction A, B, C, D and E.



A	B	C	D	E
a) Agglutination	Precipitation	Phagocytosis	Inflammation	Neutralization
b) Neutralization	Agglutination	Precipitation	Phagocytosis	Inflammation
c) Neutralization	Agglutination	Phagocytosis	Precipitation	Inflammation
d) Neutralization	Agglutination	Phagocytosis	Inflammation	Phagocytosis

37. Which is not correct pair?

MALT - Lymphoid tissue in Urino-genital tracks
GALT - Protect the body from invasion in the gut
BALT - Found in respiratory mucosa
Tonsils - Tissue masses located at heart

38. Match the column I and column II about the white blood cells by adult human.

COLUMN I	COLUMN II
1. Lymphocytes	A. 2000 – 7000
2. Neutrophills	B. 40 – 5000
3. Basophils	C. 1500-4000
4. Eosinophils	D. 50-100

a) D C B A b) C D A B
c) C A D B d) C A B D

39. Helper T cells releases a chemical called as
a) Helper T cells b) Cytokine c) Killer cell d) Both (a) and (c)

40. Who was experiment revealed the basic structure of the immunoglobulin?
a) James Watson and Francis Crick b) Proter and Edelman
c) Andrew Fire and Craig Mellow d) Dr Edward Jenner

41. **Assertion (A) :** Antigen
Reason (R) : Molecule with reacts with antibodies.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

42. Which antigen–binding site and is a part of antibody which recognized & binds to antigen ?
a) Epitope b) Paratope c) Haptens d) All the above

43. Immunoglobin found in serum (new born) body is
a) IgG b) IgA c) IgM d) IgE

44. Macrophages are also known as
a) Phagocytes b) B-cells c) NK cells d) Tumour cells

45. Molecular weight of L chain (light) _____
a) 25,000 Da b) 50,000 Da c) 214 Da d) 450 Da

46. The functions of immunoglobulin are
a) Agglutination b) Precipitation c) Opsonisation d) All the above

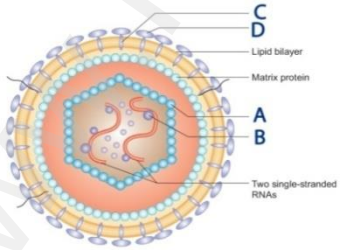
47. The reaction between particulate antigen interacts with antibody it would result in
a) Precipitin reaction b) Agglutinaion reaction
c) Opsonisation d) Neutralization

48. Which is a biological preparation that provides active acquired immunity to particular disease and resembles a diseases causing microorganisms?
a) Vaccine b) Chemotherophy c) Durgs d) Antibioties

49. DPT
a) Diphtheria b) Pertussis c) Tetanus d) All the above

50. Who prepared first vaccine for small pox?
a) Louis Pasteur b) Dr.Albert Sabin c) Dr.Jonas Salk d)Dr.Edward Jenner

51. Identify A, B, C and D in the given diagram of HIV virus.



A	B	C	D
a) gp 120	gp41	Reverse transcriptase	Capsid
b) gp41	gp120	Revere transcriptase	Capsid
c) Capsid	Transcriptase	gp120	gp41
d) Capsid	Reverse transcriptase	gp41	gp120

52. The human immunodeficiency virus belongs to the genus
a) Rabeto virus b) Lentivirus c) HPV virus d) HBV virus

53. Confirmatory test of HIV
a) Western blot b) ELISA c) Both (a) and (b) d) None

54. **Assertion (A):** Normal cell show a property called contact inhibition, which inhibits uncontrolled growth.
Reason (R) : Cancer cells do not have this property, as a result, cancerous cells divide continuously giving rise to mass of tissues called tumours.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

55. Metastasis is
a) Rapid division in cancer cells b) Regeneration of cancer cells
c) Spreed of cancer cells to new sites d) All the above

56. Which age group are vulnerable to group (peer) pressure and many youngsters are pushed into experimenting with drugs and alcohol ?
a) Adult b) Puberty c) Child hood d) Adolescence

57. Which is highly dynamic period of psychological and social changes in individuals ?
a) Adult b) Puberty c) Child hood d) Adolescence

58. Match the column I and column II by classification of drugs

	COLUMN I	COLUMN II
p	Stimulants	(i) Phencyclidine, LSD
q	Depressants	(ii) Bhang, Ganja
r	Narcotic	(iii) Opium, Morphine
s	Cannabis	(iv) Barbiturates, Transquilizers
t	Hallucinogens	(v) Amphetamines, Cocaine

a) p – (iii), q – (iv), r – (i), s – (ii), t – (iii) b) p – (iv), q – (i), r – (iii), s – (ii), t – (v)
c) p – (v), q – (iv), r – (iii),s – (ii), t – (i) d) p – (v), q – (iv), r – (iii), s – (i), t – (ii)

59. Which one is obtained by acetylation of morphine ?
a) Heroin b) Cocaine c) Charas d) Alcohol

60. If the intake of the drug or alcohol is abruptly stopped he (or) she would develop
a) With symptoms b) Withdrawal symptoms
c) No symptoms d) None

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BEST WAY(ZOOLOGY)

MICROBES IN HUMAN WELFARE

(Chapter – 8 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 50
TIME : 45 Mins

1. Which of the following are beneficial and contribute to human welfare?
   a) Microorganisms b) Bacteria c) Virus d) Both (b) and (c)
2. Lactic acid bacteria (LAB)
   a) Lactobacillus acidophilus b) Lactobacillus lactis
   c) Strptococcus d) All the above
3. Which bacteria grows in milk and convert into card thereby digesting the milk protein casein?
   a) Lactobacillus acidophilus b) Lactobacillus lactis
   c) Streptococcus d) All the above
4. The flavour in yogurt is due to
   a) Acetaldehyde b) Acetaamine c) Rennet d) Cellulose
5. Which be used to separate milk into solid curd for cheese making ?
   a) Pectinase b) Protease c) Rennet d) Cellulase
6. Which are compounds in food (fibers) that induce the growth or activity of beneficial micro organisms?
   a) Prebiotics b) Probiotics c) Both (a) and (b) d) None
7. Match the column-I and Column –II

	COLUMN – I	COLUMN –II
A	Streptococcus thermophilus	i) Large holes in swiss cheese production of large amount Co_2
B	Propionibacterium	ii) Coagulate the milk protein and convert the lactose
C	Saccharomyces cervisiae	iii) Dough used idlis and dosas fermantation
D	Leuconostoc mesenteroides	iv) Dough used in bread making fermentation

   a) (iv) (iii) (ii) (i) b) (iii) (ii) (iv) (i)
   c) (ii) (i) (iv) (iii) d) (ii) (i) (iii) (iv)
8. Large holes in swiss cheese is due to the production of large amount of carbon-dioxide
   a) Leuconostoc mesenteroides b) Propionibacterium shermanii
   c) Saccharomyes cerevisiae d) Streptococcus thermophilus
9. The lough used in the preparation of idlis and dosas are fermented by the bacteria
   a) Leuconostoc mesenteroides b) Propionibacterium shermanii
   c) Saccharomyes cerevisiae d) Streptococcus thermophilus
10. Basker's yeast
   a) Leuconostoc mesenteroides b) Propionibacterium shermanii
   c) Saccharumyes cerevisia d) Streptococcus thermophilus
11. **Statement 1 :** Yogurt.
   Statement 2 : Produced by bacterial fermentation of milk and lactic acid
   (a) Statement I in correct and II wrong
   (b) Statement I and II wrong
   (c) Statement I and II correct
   (d) Statement I is wrong and II is correct

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12. Single Cell Protein (SCP) refers to edible unicellular microorganisms like
a) Spiruling b) Prebiotics c) Probiotics d) All the above

13. Amtibiotic means
a) Against life b) Anti against life c) Pre life d) Pro life

14. Which is an applied science deals with the biochemical process of fermentation and its practical uses ?
a) Microbiology b) Zymology c) Oenology d) Pathamalogy

15. Who first used the term antibiotic?
a) Alexander Fleming b) Selman Waksman c) Ernst Chain d)Howard Florey

16. Which is referred to as the "Queen of drugs" ?
a) Streptomycin b) Tetracycline c) Chlortetracycline d) Penicillin

17. Given below statement, Find out which one is True / False
(i) Broad spectrum antibiotic act against a wide range of disease-causing bacteria.
(ii) Narrow-spectrum antibiotic are active against a selected group of antibiotics to kill micro organisms.
(iii) Antibiotic is not the property of antibiotics to kill microorganisms.
(iv) Tetracycline is a broad spectrum viral antibiotic that inhibits microbial protein synthesis.

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

18. **Assertion (A) :** Antibiosis
Reason (R) : Property of antibiotics to kill micro organisms
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

19. Streptomyces griseus especially against
a) Saccharomyces cerevisiae b) Mycobacterium tuberculosis
c) Streptococus thermophilius d) Leuconostoc mesenteroided

20. Why narrow spectrum antibuiotics are preferred over broad spectrum antibiotics?
i) Narrow spectrums are effectively
ii) Accurately target specific pathogenic organisms
iii) Less likely to cause resistance
iv) Fight against them and multiply
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

21. **Statement 1:** Win and beer are produced without distillation
Statement 2: Whisky, brandy and rum are obtained by fermentation and distillation.
(a) Both statements 1 and 2 are incorrect
(b) Both statements 1 and 2 are correct
(c) Both statements 1 and 2are correct and statement 2 is the correct explanation of statement1
(d) Statements 1 is correct, statement 2 is incorrect.

22 Who was the first to use the term "antibiotic" ?
a) Alexander Fleming b) Selman Wasksman c) Howard Florey d) Ernst Chain

23. Study of wine and wine making
a) Zymology b) Oenology c) Microbiology d) Entamology

24. Match the correct options

1. Beer	-	a. 4-6 % alcohol
2. Wine	-	b. 35-50% alcohol
3. Wine Cooler	-	c. 3-5% alcohol
4. Distilled spirits	-	d. 9-14% alcohol

a) 1-d, 2 – c, 3 – b, 4 – a b) 1-c, 2 – d, 3 – a, 4 – b
c) 1-b, 2 – a, 3 – c, 4 – d d) 1-b, 2 – c, 3 – d, 4 – a

25. Pathaneer
(i) In some part of South India a traditional drink
(ii) Obtained from fermenting sap of palms and coconut trees
(iii) It is refreshing drink, which in boiling produces jaggery (or) palm sugar
(iv) Alter 24 hours pathaneer becomes unpalatable and it is used for the production of vinegar
(a) (i) (ii) and (iii) (b) (i) (ii) and (iv) (c) (ii) (iii) and (iv) (d) (i) (iii) and (iv)

26. Which one is called as industrial alcohol?
(a) Biodiesel (b) Gasoline (c) Ethanol (d) All the above

27. The principal substrates for the commercial production of industrial alcohol include
(a) Molasses (b) Potatoes (c) Wood wastes (d) All the above

28. Fill the fermentation process.
$C_6H_{12}O_6 \longrightarrow 2C_2H_5OH + 2CO_2\uparrow$
(a) Bacteria (b) Yeast (c) E.coli (d) Protozovan

29. Biodiesel
(i) Made from vegetable oil, fat or greases
(ii) Diesel engines without altering the engine
(iii) The Government of India approved the National Policy on bio fuels in 10th August
(iv) Non-roxic, biodefradable and produces lower level of air pollutants
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (i) (ii) (iii) and (iv)

30. Match the column I and column II production of organic and acid by microbes.

	COLUMN - I	COLUMN - II
A	Citric acid	(i) Rhizopus oryzae
B	Acetic acid	(ii) Clostridium butyricum
C	Fumaric acid	(iii) Aspergillus niger
D	Butyric acid	(iv) Lactobacillus
E	Lactic acid	(v) Acetobacter aceti

a)	a-(ii)	B-(iv)	C-(v)	D-(iii)	E-(i)
b)	a-(iii)	B-(v)	C-(iv)	D-(ii)	E-(i)
c)	a-(iii)	B-(v)	C-(i)	D-(ii)	E-(iv)
d)	a-(iv)	B-(v)	C-(iii)	D-(i)	E-(iv)

31. Which is used as an immunosuppressant in organ transplantation ?
a) Rennet b) Satains c) Insulin d) Cyclosporin A

32. Which of the following is produced by the bacterium streptococcus ?
a) Streptonase b) Streptokinase c) Both (a) and (b) d) None

33. Whitch bacteria are used as "clo tbuster" ?
a) Streptococcus b) Streptococci c) Both (a) and (b) d) Cyclosporin A

34. Cyclosporin A produced by
a) Saccharomyces cerevisiae b) Trichoderma polysporum
c) Mylobacterium tuberculosis d) Streptomyus aureofacines

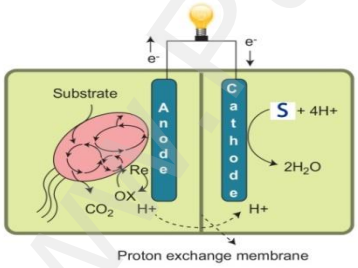
35. **Statement 1 :** Cyclosporin A used for its anti inflammatory, antit fungal and anti parasitic.
Statement 2: Statins produced by the yeast have been used to lower blood cholesterol levels
a) Both statement 1 and 2 are correct and statement 2 is the correct explantation of statement
b) Both statement 1and 2are correct but statement 2 is not correct explanation of statement 1
c) Both statement 1 and 2 are correct
d) Both statement 1 and 2 are incorrect

36. Which one is not correct pair ?

(a)	Cyclosporin A	–	Trichoderma polysporum
(b)	Statins	–	Monascus Purpureus
(c)	Human insulin	–	Saccharomyces cerevisiae
(d)	Clost buster	–	Streptomyces griseus

37. Which is bio-electrochemical system that drives an electric current by using bacteria and mimicking bacterial interaction found in nature?
(a) Nation river conservation plant (b) Microbial cell
(c) Single cell protein (d) All the above

38. In given diagram, which gases enter to cathode fine the 'S' ?



a) CO_2 b) O_2 c) O_3 d) NO_2

39. Biogase
(i) Produced under anaerobic condition, when organic materials are converted through microbiological reactions
(ii) Primarily consists of methane (63 Percent) along with CO_2 and hydrogen.
(iii) Biogas is devoid of small and burns with a blue flame with out smoke.
(iv) A bio – electrochemical system that drives an electric current by using current by using bacteria and mimicking bacterial interaction found in nature.
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

40. Methane producing bacteria are called as
a) Organotrophus b) Methanogenus c) Methanotrophus d) Eubacteria

41. In biogas plant, anaerobic digestion is carried out in an air tight cylindrical tank known
a) Digester b) Booster c) Cooking d) All the above

42. The technology of biogas production was developed in India through efforts of.
a) KVK b) IARI c) Both (a) and (b) d) WHO

43. Which method use of naturally occurring (or) genetically engineered microorganisms to reduce or degrade pollutants?
a) Biofertiliser b) Bioremediation c) Organic d) Farming

44. Genetically engineered microorganism
a) Alexander Fleming b) Anandha Mohan Chakrabarty
c)Selman Waksman d) Ernst Chain

45. Which enzymes to break down PET plastic into terephthalic acid and ethylene glycol?
a) PETase b) MHETase c) Both (a) and (b) d) Ethylase

46. Which one is capable of degrading benzene and variety of halogenated organic compounds including trichloroethylene and vinyl chloride?
a) Dechloromonas aromatic b) Phanerochaete chrysoporium
c) Nitrosomons europaea d) Pseudomonas putida

47. Which fungus a potential candidate for bioremediation projects involving large quantities of plastics, polyaromatic hydrocarbons, dyes, trinitrotoluene, etc.,?
a) Dechloromonas aromatic b) Pestalotiopsis microspora
c) Phanerochaete chrysosporium d) Nitrosomonas europaea

48. Which of the following microorganism is used for production of citric acid in industries?
a) Lactobacillus bulgaris b) Penicillium citrinum
c) Aspergillus niger d) Rhizopus nigricans

49. Which of the following pair is correctly matched for the product produced by them?
a) Acetobacter aceti - Antibiotics
b) Methanobacterium - Lactic acid
c) Penicilium notatum - Acetic acid
d) Saccharomyces cerevisiae - Ethanol

50. The gases produced in anaerobic sludge digesters are
a) Methane, oxygen and hydrogen sulphide.
b) Hydrogen sulphide, nitrogen and methane.
c) Methane, hydrogen sulphide & CO_2
d)Hydrogen sulphide, methane and sulphur dioxide

ALL THE BEST

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BEST WAY (ZOOLOGY)

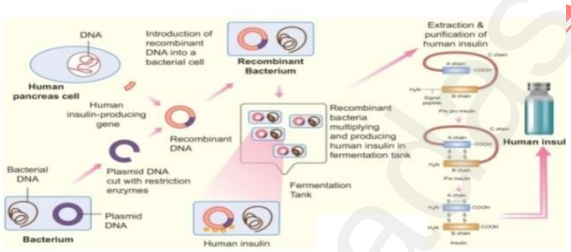
APPLICATIONS OF BIOTECHNOLOGY

(Chapter – 9 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 50
TIME : 45 Mins

1. Which involves extracting a gene from one organism, of the same or another species?
   a) Genetic engineering b) Gene therapy
   c) Biotechnology d) Recombinant DNA
2. Which cells of Islets of Langerhans in the pancreas is synthesized by human insulin?
   a) ∝ Cells b) β-cells c) Both (a) and (b) d) μ Cells
3. Polypeptide chains A has
   a) Two polypeptide chain b) Three polypeptide chain
   c) Four polypeptide chain d) Poly polypeptide chain
4. Insulin
   i) Controls the level of glucose in blood.
   ii) It facilitates the cellular uptake and utilization of glucose.
   iii) Deficiency of insulin leads to diabetes mellitus-characterized by increased blood glucose level
   iv) A non continuous program of insulin dependence is required to treat this deficiency.
   a) (i) (ii)and (iii) b) (i) (iii) and (iv) c) (i) (ii)and (iv) d) (ii) (iii) and (iv)
5. What does the given diagram represent ?



   a) Production of human growth hormone b) Production of recombinant HB vaccine
   c) Production of human insulin d) Human Blood-clothing factor VIII
6. Which animals of plasmids first involved the insertion of the human insulin gene?
   a) Virus b) Bactria c) E. Coli d) Yeast
7. In 1986 human insulin was marketed under the trade name is
   a) Recombivax b) Engerix – B c) Both (a) and (b) d) Humulin
8. From the given statements, select the suitable answer
   Statement (A) : The structure of animal insulin is different from human insulin.
   Statement (B) : It caused allergic reactions to some diabetic patients.
   a) Both the statement A and B are correct
   b) Both the statement A and B are wrong
   c) Statement A is correct and statement B is wrong
   d) Statement A is wrong and statement B is correct
9. First transgenic cow Rosie produced by
   a) 1987 b) 1997 c) 1999 d) 2000

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10. The human protein richly found in the transgenic cow, Rosie is
a) Alpha loctalbumin b) Serum albumin c) Casein d) Lactoferrin

11. Interferon are
i) Proteinaceous, antiviral
ii) Species specific substances
iii) It stimulates the RNA to produce antiviral.
iv) Produced by mammalian cells, when infected with viruses.
a) (i) (ii) and (iii) b) (i) (iii) and (iv) c) (i) (ii) and (iv) d) (ii) (iii) and (iv)

12. Interferons were discovered by
a) Best and Banding b) Alexander Fleming
c) Anandha Mohan Charkrabarty d) Alick Isaac and Jean Lindeman

13. Which vaccines, that uses components of a pathogenic organism rather than the whole organism?
a) Subunit recombinant vaccines b) Attenuated recombinant vaccines
c) DNA vaccines d) All the above

14. **Assertion (A):** Attenuated recombinant vaccines
Reason (R) : Genetically modified pathogenic organisms that are made non pathogenic and are used as vaccines
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

15. Which process involves the transfer of a normal gene, into a person's cells that carries one or more mutant alleles?
a) Gene therapy b) Biotechnology
c) Recombinant DNA d) Genetic engineering

16. The main thrust of gene therapy has been directed at correcting single gene mutation as
a) Cystic fibrosis b) Haemophilia c) Hepatitis B d) Both (a) and (b)

17. The genetic detect adenosine deaminase (ADA) deficiency may be cured permantly by
a) Introducing bone marrow cells producing (ADA) into the cell at an early embryonic stages.
b) Administratin adenosine derminase activators.
c) Periodic infusion of genetically engineered lymphocytes having functional ADA, cDNA.
d) Enzyme replacement therapy

18. The first clinical gene therapy was given by
a) Early Erery b) French Anderson ` c) Best d) Banting

19. ADA deficiency patients the non-functioning by
a) B cells b) T cells c) Plasma cells d) Dentitric cells

20. In children ADA deficiency could be curried by ---------- transplantation.
a) Thymus b) Bone marrow c) Lymph node d) MALT

21. Which cells maintain their undifferentiated state even after undergoing numerous mitotic divisions?
a) Stem cell b) Somatic cell c) Germ cell d) Nerve cell

22. Stem cell banking
i) Extraction, processing and storage of stem cells.
ii) They may be used for treatment in the future.
iii) Stored in specifically for use by the individual and collected by banking costs are paid.
iv) Cells are taken from embryo.
a) (i) (iii) and (iv) b) (ii) (iii) and (iv) c) (i) (ii) and (iii) d) (i) (ii) and (iv)

23. ES cells are
a) Mortal b) Immoral c) Mobil d) Non mobile

24. Which cell is a rich sources of adult ?
a) White bone marrow b) Red bone marrow c) Thymus d) All the above

25. ELISA is a biochemical procedure discovered by
a) Eva Engvall and Peter Perlmanin b) Alick Isaac and Jean Heming
c) Best and Banding d) Alexander Fleming

26. ELISA is a biochemical procedure discovered in
a) 1961 b) 1971 c) 1981 d) 1991

27. Match the bellow statement depending up the gene therapy

COLUMN I	COLUMN II
A. Gene augmentation therapy	i) Gene introduced into eggs and sperms.
B. Gene inhibition therapy	ii) Will not be inherited in later generations.
C. Somatic cell gene therapy	iii) Insertion of the antisense gene which inhibits the expression.
D. Germ line gene therapy	iv) Insertion of DNA into genome to replace the missing gene product.

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

28. During diagnosis the sample suspected to contain the antigen is immobilized on the surface on an ---------
a) ELISA plate b) PCR c) Recombinant DNA d) Gene therapy

29. In ELISA test, unreached antibodies washed away and the substrate of the enzyme hydrogen peroxidase is added with certain reagents such as
a) 4 – Chloronaphthol b) Peroxidise c) Pentose d) Reverse transcription

30. PCR technique was developed by
a) Wilmut b) Campbell c) Earl Ereky d) Kary Mullis

31. What is the technique called when RNA of interest is amplified?
a) Multiplex – PCR b) Nested – PCR
c) Asymmetric – PCR d) Reverse transcription – PCR

32. Which of the following is not a true option for the identification of a pathogen by traditional methods?
a) Culture b) Antigen – antibody reaction
c) Biochemical tests d) Metabolic tests

33. Which one of the following is not a advantage of cloning animals?
a) Aids stem cell research b) Helps in production of proteins
c) Can save endangered species d) Cloned animals age faster

34. Name the first transgenic mammal clone
a) Rosie b) Daisy c) Dolly d) Millie

35. **Assertion (A) :** Denaturation
Reason (R) : Double stranded DNA of interest in denatured to separate into two individual stands by high temperature.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

36. The foreign DNA that is introduced is called the transgene and that animals produced by DNA manipulations are called as
a) Trangenesis b) DNA animals c) Genetically engineer d) Transgenic animals

37. Product of biotechnology is
a) Transgenic crop b) Biofertilizer c) Humulin d) All the above

38. Match it.

	COLUMN – I	COLUMN - II
A	r-DNA Technology	(i) ADA deficiency
B	Biological control	(ii) Antigen – antibody interaction
C	ELISA is based on	(iii) Non conventional method of diagnosis
D	Gene therapy	(iv) Trichoderma

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

39. Which of following animals not produce for transgenic animals?
a) Rabbit b) Goat c) Rat d) Monkey

40. Which transgenic animals are used for testing the safety of vaccines?
a) Monkey b) Rat c) Sheep d) Mice

41. Given below statement find out which one is True / False about biological products.
i) Substance derived from a living organism and used for the prevention or treatment of disease
ii) Products include antitoxins, bacterial and viral vaccines, blood products & hormone extracts
iii) Products may be produced through biotechnology in a living system, such as microorganism, plant cells (or) animal cells.
iv) Products often not difficult to characterize than small molecule drugs.

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

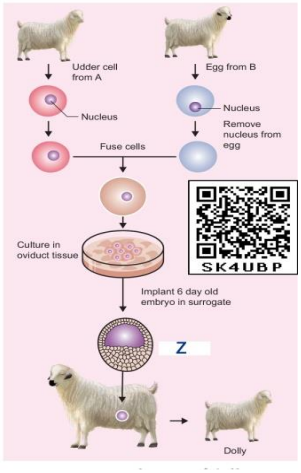
42. The first clinical gene therapy was done for the treatment of
a) AIDS b) Cancer c) Cystic fibrosis d) SCID

43. Who was the first nammale (sheep) clone developed (DOLLY) ?
a) Ian Wilmot b) Campbell c) Both (a) and (b) d) Earl Ereky

44. How many number of udder cells and were unfertilised egg cells were removed from sheep in Ian Wilmut and Campbell?
a) 266 b) 277 c) 288 d) 299

45. Hungarian agricultural engineers karl Eraky coined the term biotechnology in
a) 1981 b) 1918 c) 1999 d) 1919

46. Given diagram in cloning of dolly, find out "Z".



a) Blastocyst b) Blastomony c) Blastocoel d) Blastocells

47. Dolly, the sheep was obtained by a technique known as
a) Cloning by gene transfer b) Cloning without the help of gametes
c) Cloning by tissue culture of somatic cells d) Cloning by nuclear transfer

48. How many amino acids are arranged in the two chains of insulin?
a) Chain A has 12 and Chain B has 13
b) Chain A has 21 and Chain B has 30 amino acids
c) Chain A has 20 and chain B has 30 amino acids
d) Chain A has 12 and chain B has 20 amino acids.

49. ELISA is mainly used for
a) Detection of mutations b) Detection of pathogens
c) Selecting animals having desired traits d) Selecting plants having desired traits

50. Transgenic animals are those which have
a) Foreign DNA in some of their cells b) Foreign DNA in all their cells
c) Foreign RNA in some of their cells d) Foreign RNA in all their cells

ALL THE BEST

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BEST WAY(ZOOLOGY)

ORGANISMS AND POPULATIONS

(Chapter – 10 : One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 60
TIME : 45 Mins

1. The world 'Ecology' is derived from the Greek term by
   a) Oikos b) House c) Cology d) Logos
2. Group of individuals of any one kind of organism is called as
   a) Population b) Biotic community c) Community d) Biome
3. Environment are.
   (i) Variable and dynamic
   (ii) Temperature changes and light charges
   (iii) Diurnal and seasons
   (iv) Growth, distribution, number, behaviour and reproduction
   Which of the factors is determined by the different factors present in the environment ?
   a) (i) only b) (ii) and (iii) only c) (i) (ii) and (iv) d) All the above
4. Community is
   a) Group of independent, interacting populations of same species
   b) Group of independent and interacting populations of same species in specific area
   c) Group of independent and interacting populations of different species specific area
   d) Group of independent and interacting populations of different species
5. **Statement I :** Xerophytic habitat, the camel is able to use water efficiently and effectively for evaporative cooling through their skin and respiratory system.
   Statment II : They excrete highly concentrated urine and can also with stand dehydration up to 25% of the body weight
   a) Both the statement A and B are correct
   b) Both the statement A and B are wrong
   c) Statement A is correct and statement B is wrong
   d) Statement A is wrong and statement B is correct
6. Match the column I and column II above adaptations of aquatic animals.

	COLUMN – I	COLUMN – II
A)	Fins	(i) Floatation
B)	Streamlined body	(ii) Respiration
C)	Lateral line system	(iii) Sensory
D)	Gills	(iv) Aerodynamic
E)	Air sacs	(v) Locomotion

a) A – iii B - iv C – v D – ii E - i
b) A – iv B - v C - iii D – ii E - i
c) A – v B – iv C – iii D – i E - i
d) A – v B – iv C – i D – iii E – iii

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7. **Assertion (A) :** Crickets and grass hoppers are closely related insects that live in the same habitat.
Reason (R) : They occupy different ecological niche.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

8. The life style of an individual population in the habitat is known as.
a) Habitat b) Glilds c) Niche d) Ecosphere

9. Warm blooded animals, living in colder climate terd to hare shorter limbs, ears and other appendages when compared to the members of the same species in warmer climates?
a) Van't Hosf's rule b) Bergamann's rule
c) Allen's rule d) Jordon's rule

10. Eurythermy
(i) Eurythermy can be an evolutionary advantages.
(ii) Eurythermy is an aspect of thermoregulations in organisms.
(iii) Cold eurythermy survival of species during light ages
(iv) Eurythermy decreses a species ability to inhabit an advantage.

	(i)	**(ii)**	**(iii)**	**(iv)**
a)	True	True	False	False
b)	True	False	True	False
c)	False	True	False	True
d)	False	False	True	True

11. Incase of extreme temperature, organisms have adapted methods match by the column I and column II

A	Cysts	(i) Arctic fishes
B	Antifreeze proteins	(ii) Endamoeba
C	Hibernation	(iii) Summer sleep
D	Aestivation	(iv) Winter sleep

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

12. Light
(i) An important and essential abiotic factor.
(ii) Minimum & maximum temperature of an environment regulates the survival of cell
(iii) The quality (wavelength or colour) the intensity(actual energy in gram calories) and duration (length of day) to light are considered significant for organisms.
(iv) It influences growth, pigmentation, migration and reproduction
a) (i) (ii) and (iii) b) (i) (ii) and (iv)
c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

13 Birds and mammals attain greater body size in colder region than warmer region.
a) Van't Hosf's rule b) Bergamann's rule
c) Allen's rule d) Jordon's rule

14. Match the column I and column II about light in organisms.

	COLUMN – I	COLUMN - II
A	Positive phototaxis	(i) Volvox
B	Negative phototaxis	(ii) Root of plants
C	Positive phototaxis	(iii) Moths
D	Negative phototaxis	(iv) Sunflower

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

15. Soil temperature effects
a) Germination of seeds b) Growth of roots
c) Inhabiting micro and macro organisms d) All the above

16. **Assertion (A):** Water is heavier than air and imparts greater buoyancy onthe aquatic medium
Reasons (R) : This enables organism to float at variable levels.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

17. Which one is determined by the size of the soil particles ?
a) Texture of soil b) Porosity of soil c) Permeability d) Soil temperature

18. Wind speed is measured with an
a) Hygrometer b) Anemometer c) Haemocytometer d) ECG

19. Humidity is measured with a
a) Anemometer b) Hygrometer c) Haemocytometer d) Anemomter

20. Animals are known to modify their response to environmental changes (stress) in reasonably short time known as
a) Acclimatization b) Aestivation c) Migration d) Hibernation

21. Which biomes are large communities of plants and animals that occupy a distinct region ?
a) Aquatic b) Terrestrial c) Grassland d) Tundra

22. Which biome is a zone of permafrost ?
a) Tundra biome b) Taiga biome c) Grassland biome d) Forest biome

23. The Taiga is ---------- km wide zone south of the Tundra.
a) 1200 – 1450 b) 1300 – 1450 c) 1450 – 1650 d) Above 1450

24. Which forest contain no dry season ?
a) Evergreen rainforest b) Seasonal rainforest
c) Semi evergreen forest d) Dry deciduous forest

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25. Match the column – I and column – II about biome and precipitation ranges.

	BIOME	PRECIPITATION
A	Tundra biome	(i) 150 – 250mm per year
B	Taiga biome	(ii) 750 – 1500mm per year
C	Temperate forest	(iii) 380 – 1000mm per year
D	Cold deserts	(iv) Less than 250 mm per year

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

26. Alpine biome
(i) The alpine zone between timber line and snow zone
(ii) Descending order, a sub snow zone immediately below the snow zone
(iii) Meadow zone inthe centre & shrub zone which gradually merges into the Timber zone
(iv) Forest is a broad term used to describe areas where there are a large number of trees.
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

27. Which forest contain short dry period in a very wet tropical region.
a) Evergreen rainforest b) Seasonal rainforest
c) Semi evergreen forest d) Dry deciduous forest

28. Hot deserts such as
a) Sahara of North Africa b) Southwestern U.S
c) India – Thar desert d) All the above

29. Which forest consists of low precipitation?
a) Dry conifer forests b) Mediterranean forest
c) Temperate coniferous forests d)Temperate broad–leaved rainforests

30. Inland Sahara rainfall per year
a) 15mm b) Less than 15mmc) Above 15mm d) None

31. **Assertion (A) :** Cold deserts have short, moist and moderately warm summers with Fairly long, cold winter.
Reason (R) : The winter temperature is between -2°C and 4°C and summer temperature is between 21°C and 26°C.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

32. Which desert is not found at low altitude ?
a) Sahara desert b) Desert of Mexico c) Desert of Australia d) Ladakh

33. Catadromous migration
a) Migrate from sea to fresh water b) From fresh water to sea water
c) From sea water to marine water d) From fresh water to

34. **Assertion (A) :** Migration.
Reason (R): Peculiar and unique kind of mass population movement from one place to another and back.
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

35. Which leads to a rise in population leads ?
a) Migration b) Emigration c) Immigration d) None

36. Which of the following is correct ?

a) Population change - (Birth + immigration) – (Death + immigration)
b) Population change - (Birth + immigration) + (Death + immigration)
c) Population change - (Birth + immigration) + (Death - immigration)
d) Population change - (Birth - immigration) + (Death + immigration)

37. Populations show characteristic growth patterns or forms. These patterns can be plotted and termed as
a) J-shaped growth form b) S-shaped growth form
c) Sigmoid form d) All the above

38. r – selected species
(i) Smaller sized organisms (ii) Long life expectancy
(iii) Produce many offspring (iv) Mature early
a) (i) (ii) and (iii) b) (i) (ii) and (iv)
c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

39. It is the maximum reproductive capacity of an organisms under optimum environmental conditions known as
a) Biotic potential b) Carrying capacity
c) Environmental resistance d) All the above

40. Density dependent
a) Extrinsic factors b) Intrinsic factors c) Both (a) and (b) d) None

41. Intra specific association is observed for all livelihood processes like
a) Feeding b) Breeding c) Protection d) All the above

42. A mutually beneficial association necessary for survival of both partners is
a) Mutualism b) Commensalism c) Amensalism d) Both (a) and (b)

43. **Assertion (A) :** At high altitude a person, form plain areas, may experience altitude sickness.
Reason (R) : At high altitude atmospheric pressure is generally high leading to symptoms like nausea, fatigue, etc.,
a) A and R are true, R is the correct explanation of A
b) A and R are true, R is not the correct explanation of A
c) A is true, R is false
d) Both A and R are false

44. Where different species live together but do not affect each other ?
a) Neutral b) Positive c) Negative d) None

45. Action and behaviour of animals are instinctive or learned and animals develop certain behavioural traits or adaptations for survival ?
a) Structural adaptations b) Behavioural adaptations
c) Physiological adaptations d) All the above

46. Two most well – known behavioural adaptations are.
a) Crypsis and mimicry b) Hibernation and aestivation
c) Migration and courtship d) Migration and diapause

47. Mimicry is useful for
a) Concealment b) Protection c) Predation d) Both (a) and (b)

48. All populations in a given physical area are defined as
a) Biome b) Ecosystem c) Territory d) Biotic factors

49. Organisms which can survive a wide range of temperatuer are called
a) Ectotherms b) Eurytherms c) Endotherms d) Stenotherms

50. Match the following and choose the correct combination from the options given below.

	COLUMN I	COLUMN II
A.	Mutalism	1. Lion and deer
B.	Commensalism	2. Round worm and man
C.	Parasitism	3. Birds compete with squirrels for nuts
D.	Competition	4. Sea anemone on hermit crab
E.	Predation	5. Bernacles attached to Whales.

Dispersal

a) A- 4, B-5, C-2, D –3, E-1
b) A- 3, B-1, C-4, D – 2, E-5
c) A- 2, B-3, C-1, D – 5, E-4
d) A- 5, B-4, C-2, D – 3, E-1

51. Animals that can move from fresh water to sea called as.....
a) Stenothermal b) Eurythermal
c) Catadromous d) Anadromous

52. Some organisms are able to maintain homeostasis by physical means ...
a) Conform b) Regulate c) Migrate d) Suspend

53. Alexander Von Humbolt described for the first time:
(a) Ecological Biodiversity
(b) Laws of limiting factor
(c) Species area relationships
(d) Population Growth equation

54. Which of the following regions of the globe exhibits highest species diversity?
a) Western Ghats of India b) Madagascar
c) Himalayas d) Amazon forests

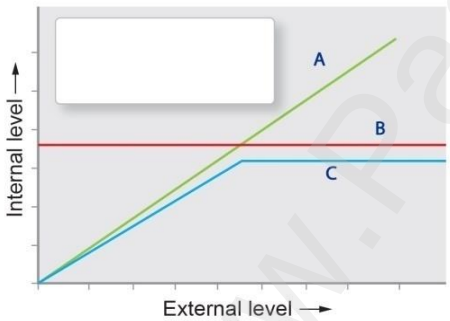
55. Population density
(i) The density of a population refers to its size in relation to unit of space and time.
(ii) Population density is the total number of that species within a natural habitat.
(iii) The population has definite structure and function that can be described with reference to time.
(iv) The density of population can be measured in serval ways.
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

56. Camels are able to
(i) Regulate water effectively for evaporative cooling through the skin respiratory system
(ii) Respiratory surface and well developed tracheal system.
(iii) Excrete highly concentrated urine.
(iv) With stand dehydration up to 25% of their body weight.
a) (i) (ii) and (iii) b) (i) (ii) and (iv) c) (i) (iii) and (iv) d) (ii) (iii) and (iv)

57. Behavioural adaptations
(i) Fleeing from a predator (ii) Hiding during sleep
(iii) Seeking refuge from climate change (iv) Camouflage perfectly
a) (ii) (iii) and (iv) b) (i) (iii) and (iv) c) (i) (ii) and (iv) d) (i) (ii) and (iii)

58. Which is a dynamic evolutionary process that fits organisms to their environment and enhancing their evolutionary fitness ?
a) Adaptation b) Hibernation c) Aestivation d) Diapause

59. The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent respectively.



S. No.	A	B	C
a.	Conformer	Regulator Partial	Regulator
b.	Regulator Partial	Regulator	Conformer
c.	Partial Regulator	Regulator	Conformer
d.	Regulator	Conformer Partial	Regulator

60. Human population shows
a) J-shaped growth curve b) Z-shaped growth curve
c) S-shaped growth curve d) All the above

ALL THE BEST

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BEST WAY(ZOOLOGY)

BIODIVERSITY AND ITS CONSERVATIONS

(Chapter – 11: One mark Test)

STD : XII
SUB : BIO - ZOOLOGY

MARKS: 60
TIME : 45 Mins

1. Which are variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems?
   (a) Biodiversity b) Biogeographically c) Both (a) and (b) d) Ecology
2. The term biodiversity was introduced by
   a) Edward Wilson b) Walter Rosen c) Fraenkel d) Singer
3. How many species of trees are present in temperate forests of the United States ?
   a) 25-35 species b) 20-35 species c) 10-25 species d) 35-45 species
4. Whom to describe diversity at all levels of biological organization from populations biomes ?
   a) Chase b) Edward Wilson c) Walter Rosen d) Hershey
5. Which medical plant growing in different ranges of the Himalayas?
   (a) Atropa belladonna (b) Rouwolfia vomitaria
   (c) Cannabis sativa (d) Datura
6. Which diversity can be measured using a variety of molecular techniques?
   (a) Ecosystem (b) Community (c) Species (d) Genetic
7. How many genetic variants of paddy produces in India?
   (a) 50,000 (b) Less than 50,000 (c) More than 50,000 (d) 1000
8. In Rouwolfia vomitaria plant, differences in the potency and concentration of the active ingredient , due to genetic diversity
   (a) Reserpine (b) Sative (c) Datura (d) None
9. Which refers to the variety in number and richness of the species in any habitat ?
   (a) Species diversity (b) Community diversity
   (c) Ecosystem diversity (d) Genetic diversity
10. Read the following assertion and reason select correct answer
    Assertion : Species richness
    Reason : Number of species per unit area at a specific time.
    a) If both assertion and reason are true but reason is correct explanation for assertion
    b) If both assertion and reason true but reason is not the correct explanation for A
    c) If assertion is true but reason is false
    d) If both assertion and reason are false
11. Biodiversity is often quantified as the number of
    (a) Genes in a region at a given time (b) Genome a region at a given time
    (c) Species in a region at a given time (d)Family in a region at a given time
12. Which diversity measured by counting the number of taxa with in a particular area, community (or) ecosystem?
    (a) Alpha diversity (b) Beta diversity
    (c) Gamma diversity (d) Delta diversity

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13. Which diversity between two adjustment ecosystem and is obtaining by comparing the number of species unique to the ecosystem ?
(a) Alpha diversity (b) Beta diversity
(c) Gamma diversity (d) Delta diversity

14. In India, with much of its land area in the tropical latitudes, is home for more than __ species of birds are present.
(a) 1200 (b) 1400 (c) 105 (d) 56

15. World's total land surface India is known to
(a) 1.4% (b) 2.4% (c) 4.1% (d) 4.2%

16. How many mega biodiversity present in India ?
(a) 10^{th} (b) 16^{th} (c) 17^{th} (d) 21th

17. Patterns of biodiversity distribution
(i) The distribution of plants and animals is not uniform around the world
(ii) Organisms require different set of conditions for their optimum metabolism and growth
(iii) Within this optimal range (habitat) a large numbers, likely to occur growth and multiply
(iv) The habitat conditions are determined by ecosystem of environment
(a) (i) (ii) and (iv) (b) (i) (ii) and (iii)
(c) (ii) (iii) and (iv) (d) all these above

18. Topics harbour more biodiversity than temperate or polar regions, especially between
(a) 23.5° N and 23.5° S (b) 23.5° S and 23.5°N
(c) 25.5° N and 25.5° S (d) 26.5° S and 26.5° N

19. Find the following statements
Statement I : India has one of the greatest ecosystem diversity on Earth
Statement II : Because alpine meadows, rain forest ,mangroves , cora reefs, grassland and deserts are present.
(a) Statement I is correct, Statement II is incorrect
(b) Statement I is correct, Statement II is correct
(c) Both statement are correct
(d)Both statement are incorrect

20. On logarithmic scale, the relationship is straight line described by the equation
(a) Log C = log S+Z log A (b) Log S = log C+Z log A
(c) Log Z log A= log S- Z log A (d) log S= log C – Z log A

21. Match the column I and column II about the landmass biogeographic region.

	COLUMN I		COLUMN II
A)	Trans Himalayan Region	(i)	15.6%
B)	Himalayas	(ii)	6.9%
C)	Indian Desert	(iii)	7.2%
D)	Semi-Arid Zone	(iv)	5.7%

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

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22. Which species have proved harmful to both aquatic and terrestrial ecosystems?
a) Extinctions b) Exotic c) Co-extinctions d) Exploitation

23. Which region between the desert and Deccan plateau, including the Aravalli hill range covering?
a)Trans Himalayan region b) Indian desert
c) Western Ghats d) Semi – Arid Zones

24. **Statement I :** Decrease in species diversity
Statement II : One ascends a high mountain due to drop in temperature
(a) Statement I is correct, Statement II is incorrect
(b) Statement I is correct, Statement II is correct,
(c) Both statement are correct
(d)Both statement are incorrect

25. The annual rainfall of Western Ghats
a) 200 mm b) 2000 mm c) 300 mm d) 3000 mm

26. Landmass of Deccan Peninsula
a) 5.7% b) 7.2% c) 4.3% d) 6.9%

27. Swamp deer seen in
a) Gangetic region b) North East India
c) Himalayas d) Western Ghats

28. Golden langur seen in
a) Gangetic plains b) North East India
c) Coastal region d) Andaman and Nicobar Island

29. How many number of islets constitute the Lakshadweep?
a) 21 b) 23 c) 24 d) 25

30. Which of the following is not correct pair ?
a) Coastal Region – Turtles b) North–East India – Golden langur
c) Deccan peninsula – Barking deer d) Semi –Arid zones – Hog-deer

31. Which of the following statements are True / False ?
i) Western Ghats are mountain ranges along the west coast of India, extending over almost 1500 km from sat pena in south so Gujarat to southernmost tip of Kerala.
ii) Semi-Arid Zones between the desert and the Deccan plateau, including the Aravalli range
iii) Indian Desert corners much of the southern mud south-central plateau with a predominantly deciduous vegetation
iv) North-East India plains are relatively homogenously defined by the Ganges river system

	(i)	**(ii)**	**(iii)**	**(iv)**
a)	True	False	False	True
b)	True	False	True	False
c)	True	True	False	False
d)	False	False	True	True

32. **Assertion :** Andaman and Nicobar Islands
Reason : Bay of Bengal have highly diverse set of biomes.
a) If both assertion and reason are true but reason is correct explanation for assertion
b) If both assertion and reason true but reason is not the correct explanation for assertion
c) If assertion is true but reason is false
d) If both assertion and reason are false

33. Which animals have specialized dietary needs such as carnivores, frugivores and the need to for age over much larger areas than general dietary herbivores and omnivores?
a) Birds b) Reptiles c) Fishes d) Mammals

34. Which statement is not correct ?

a) Loss of native species	- Hybridization between native and non- native species.
b) Natural disasters	- Tsunami, forest fine, earth quake and volcanoes.
c) Over exploitation of resources	- Poaching, over fishing, hinting and mining.
d) Co-extinction	- Affects about 73% of all species.

35. Why species are forced to adapt to the changes in the environment or move to other places?
a) Natural habitats b) Habitat loss c) Artificial habitats d) None

36. "Lungs of the planet" is
a) Gir forest b) Amazon c) Kodaikanal d) Nilgiri

37. What are the hills of Tamil Nadu have been destroyed rapidly for human occupancy?
a) Kodaikanal and Yercaud b) Nilgiri and Yercaud
c) Kodaikanal and Nilgiri d) Ooty and Connoor

38. Which animals corridors and migratory routes and highly vulnerable ?
a) Sparrows b) Elephant c) Dodo d) Sea cow

39. Which animals have become extinct in the last 200-300 years due to over exploitation by Human?
a) Dodo b) Passenger pigeon
c) Steller's sea cow d) All the above

40. Match the column – I and column –II about landmass of biogeographic region.

	COLUMN - I		COLUMN - II
P	Coastal region	(i)	4.3%
Q	Deccan peninsula	(ii)	2.5%
R	Gangetic plains	(iii)	5.2%
S	North East India	(iv)	11%

a) P –(iv) Q-(iii) R-(ii) S-(i)
b) P- (iii) Q-(iv) R-(i) S-(ii)
c) P-(ii) Q-(i) R-(iv) S-(iii)
d) P-(ii) Q-(i) R-(iii) S-(iv)

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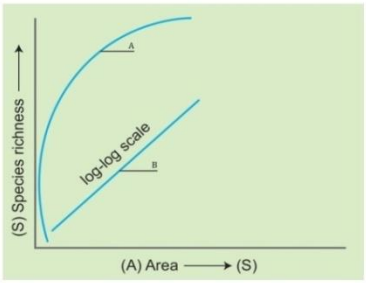
41. Which fish introduction into Lake Victoria in East Africa?
a) Nile perch b) Cichlid c) Tilapia d) Labeo

42. Zoological name of papaya mealy bug
a) Paracoccus marginatus b) Oreochromis mossambicus
c) Labeokontius d) Achatinafulica

43. Which option correctly describes the equations for curves A and B in the given graph of species - area relationship?



	A	B
a)	$S=CA^Z$ Log	C=Log S + Z log A
b)	Log C= Log S + Z log A	$S=CA^Z$
c)	Log S= Log C + Z log A	$S=CA^Z$
d)	$S=CA^Z$	Log S= Log C + Z log A

44. Steller's sea cow of Russia
(a) Natural extinction (b) Mass extinction
(c) Anthropogenic extinction (d) Locally extinction

45. **Assertion :** Co-extinction
Reason : Species is the loss of a species as a consequence of the extinction of another
a) If both assertion and reason are true but reason is correct explanation for assertion
b) If both assertion and reason true but reason is not the correct explanation for A
c) If assertion is true but reason is false
d) If both assertion and reason are false

46. Match column I and column II and select the correct option Nationals Park in Tamilnadu with establishment of year

	COLUMN I	COLUMN II
A	Guindy	(i) 1990
B	Gulf of manner marine	(ii) 1980
C	Indira Gandhi (Anamalai)	(iii) 1976
D	Mudumalai	(iv) 1989

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

47. IUCN means
(a) International Union for Contribution of Nature
(b) International Union for Conservation of Nature
(c) International Union for Center of Ecology
(d) Intrnational Union fro Ecosystem

48. How many number of plant species are endangered in the IUCN red list in 2012?
(a) 1102 (b) 1197 (c) 3079 (d) 2655

49. The Earth has experienced quite a few mass extinctions due to environmental catatrophes.
(a) Natural extinction (b) Mass extinction
(c) Anthropogenic extinction (d) Locally extinction

50. WCU abbreviations
(a) World Conservation of Inida (b) World Conservation Union
(c) World Conservation of Union (d) World Care Unit

51. Which conservation of genetic resources through their protection with in a natural or man made ecosystem?
(a) Insitu conservation (b) Ex-situ conservation (c) Both (a) and (b) (d) None

52. Number of National Parks in India
(a) 771 (b) 104 (c) 544 (d) 18

53. Wild Life Protection Act (WPA) in
(a) 1972 (b) 1982 (c) 1992 (d) 2002

54. Select the incorrect pair

(a) Gulf of Manner Marine	-	1980
(b) Vedanthangal Lake Birds	-	1936
(c) Point Calimere	-	1967
(d) Mundanthurai	-	1976

55. Biogeographical regions of India, find out "A".

a) Jim Corbett National park -Uttarakhand b) Kaziranga National Park -Assam
c) Gir forest - Gujarat d) Gulf of Mannar Marine -Tamil Nadu

56. Kaziranga National Park in
(a) Kerala (b) Assam (c) Gujarch (d) Nicobar Island

57. MAB
(a) Man And Biosphere (b) Man and Biodiversity
(c) Man and Biology (d) Man and Botanical gardens

58. Which conservation of selected rare plants (or) animals in places outside their natural homes
(a) In – situ conservation (b) Ex-site conservation
(c) Both (a) and (b) (d) Biodiversity

59. An example of ex-situ conservation is
(a) Sacred Grove (b) National Park
(c) Seed Bank (d) Wildlife Sanctuary

60. **Assertion :** The Environmental conditions of the tropics are favourable for speciation And diversity of organisms.
Reason : The climate seasons, temperature, humidity and photoperiod are more or less stable and congenial.
a) Both Assertion and Reason are true and Reason explains Assertion correctly.
b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
c) Assertion is true , but Reason is false.
d) Both Assertion and Reason are false.

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STD : XII
SUB : BIO - ZOOLOGY

BEST WAY(ZOOLOGY)
ENVIRONMENTAL ISSUES
(Chapter – 12: One mark Test)

MARKS: 50
TIME : 45 Mins

1. Which is any undesirable change in the physical, chemical and biological characteristics of the environment due to natural causes and human activities?
(a) Pollution (b) E-waste (c) Agrochemicals (d) Wastes

2. Which pollution can be broken down by natural process?
(a) Rapidly degradable (b) Slowly degradable
(c) Persistent pollutants (d) Non-degradable pollutants

3. Which pollutants can not be degraded by natural processes?
(a) Rapidly degradable (b) Persistent pollutants
(c) Non- persistent pollutants (d) Non-degradable pollutants

4 Right to Clean Water is a fundamental right, under the Indian Constitution
a) Article 12 b) Article 21 c) Article 31 d) Article 41

5. With which of the following, the Agenda 21' of Rio Summit, 1992 is related to?
a) Sustainable development
b) Combating the consequences of population
c) Mitigation norms of Green House Gases (GHGs) emission.
d) Technology transfer mechanism to developing countries for 'clean-energy' production

6. Match it:-

(A) Carbon monoxide	-	(i) Depletion of ozone
(B) Sulphur dioxide	-	(ii) Fossil fuel combustion
(C) Nitrogen oxides	-	(iii) Rapid urbanization
(D) Chlorofluorocarbons	-	(iv) Incomplete combustion of fossil fuels

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

7. The 'thickness' of Stratospheric Ozone layer is measured in/on:
a) Sieverts units b) Dobson units c) Melson units d) Beaufort Scale

8. As per 2017 statistics, the highest per capita emitter of Carbon dioxide inthe world is
a) USA b) China c) Qatar d) Saudi Arabia

9. The use of microorganism metabolism to remove pollutants such as oil spills in the water bodies is known as
a) Biomagnification b) Bioremediation
c) Biomethanation d) Bioreduction

10. Particulate matters are
(i) Tiny particle of solid matter suspended in a gases (or) liquid
(ii) Combustion of soil fuels, fly ash produced in thermal power plants
(iii) Cement factories are the main sources of particulate matter pollution
(iv) Chlorofluorocarbons are the main sources of ozone depletion
(a) (i) (ii) and (iii) (b) (ii) (iii) and (iv) (c) (i) (ii) and (iv) (d) (i) (iii) and (iv)

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11. Which causes aggravates exiting health conditions such as emphysema and asthma?
(a) Soil pollution (b) Water pollution (c) Noise pollution (d) Air pollution

12. What are the judical safeguard to environmental protection?
(a) Green bench (b) National Green Tribunal
(c) Both (a) and (b) (d) None of these

13. **Statement I :** CO is produced mainly due to incomplete combustion of fossil fuels.
Statement II : Automobiles are major causes of CO pollution in large cities and towns
(a) Statement I is correct, statement II is incorrect
(b) Statement I is correct, statement II is correct
(c) Both statement are correct
(d) Both statement are incorrect

14. Smog
(i) Increases ground level ozone and particular matter, reducing visibility
(ii) Can make breathing more difficult , especially for people with asthma
(iii) It has also been known to cause corrosive damage to buildings and vehicles
(iv) Affects plants and damages crops only
(a) (i) (ii) and (iv) (b) (i) (ii) and (iii)
(c) (ii) (iii) and (iv) (d) (i) (iii) and (iv)

15. **Assertion :** Water is essential for life and the health of the environment
Reason : A health environment is one in which water quality supports a rich and varied community of organisms and protects public health.
a) If both assertion and reason are true but reason is correct explanation for assertion
b) If both assertion and reason true but reason is not the correct explanation for A
c) If assertion is true but reason is false
d) If both assertion and reason are false

16. PCB means
(a) Poly Chlorinated Bonds (b) Cathode Ray Tube
(c) Polymerase Chain Reaction (d) Polychlorinated Diphenyl

17. Factory effuents , sewage, underground, mines, oil wells, as
(a) Point sources (b) Non – Point sources (c) Leaks and spills (d) All the above

18. Soil fertility is affected and the system becomes uninhabitable by
(a) Air pollution (b) Water pollution (c) Soil pollution (d) Sound pollution

19. Excess of fluoride in drinking water causes
(a) Ascariasis (b) Fluorosis (c) Filariasis (d) All the above

20. Which among the following always decreases in a Food chain across tropic levels?
a) Number b)Accumulated chemicals c) Energy d) Force

21. In E-waste generated by the Mobile Phones, which among the following metal is most abundant?
a) Copper b) Silver c) Palladium d) Gold

22. SMOG is derived from :
a) Smoke b) Fog c) Both (a) and (b) d) Only A

23. The Hydrochlorofluorocarbons (HCFCs) are the compounds which have the following molecules
a) Hydrogen b) Carbon c) Chlorine d) Fluorine

24. Excess of fluoride in drinking water causes:
a) Lung disease b) Intestinal infection c) Fluorosis d) None of the above

25. USEPA
(a) United States Ecology Protection Agency
(b) United States Effluent Protection Agency
(c) United States Environment Program Application
(d) United States Environmental Protection Agency

26. Biomagnification results in increases fox city and may even be lethel, this phenomenon is well established for
a) Lead and Copper (b) Mercury and DDT
c) Copper and DDT (d) Mercury and Copper

27. When run off from lard containing nutrients reaches water bodies like lakes, it results, in dense growth of plant life this phenomenon is called as ?
(a) Biomagnification (b) Eutrophication
(c) Ecosystem (d) Food chain

28. Which of the main objective of a process is to reduce organic and inorganic components?
(a) Waste water treatment (b) Primary treatment
(c) Secondary treatment (d) Tertiary treatment

29. Which treatment involves the physical removal to solid and particulate organic and inorganic materials from sewage through filtration and sedimentation?
a) Primary b) Secondary c) Tertiary d) All the above

30. The soil and small pebbles (grit) are removed by
a) Filtration b) Sedimentation c) Sequential filtration d) Supernatant

31. In tertiary sewage treatment, UV treatment is an alternative for ---------
a) Biological treatment b) Sedimentation
c) Chlorination d) Sequential filtration

32. Read the given statement and select the correct options.
Statement 1 : Secondary treatment sludge is pumped into large tanks called anaerobic sludge digesters.
Statement 2 : Here the bacteria which grow anaerobically, digest the bacteria and fungi in the sludge.
a) Both Statement 1and2 are correct and statement 2 isthe correct explanation of statement 1
b) Both Statement 1and2 are correct and statement 2 is the not correct explanation of statement1
c) Both statement 1 and 2 are correct
d) Both statement 1 and 2 are incorrect

33. Who was a supporter and export of organic forming ?
(a) Dr.Sulthan (b) G.Nammalvar (c) Henri Brssion (d) Fabry

34. Which one of the following wrong pair ?

(a) RZWT	–	Root Zone Waste water Treatment
(b) DEWATS	–	Decentralized Waste water Treatment System
(c) USEPA	–	United State Environmental Protection Agency
(d) MOEFCC	–	The ministry of Environment Climate Change

35. Match the column –I and column II about major sources of solid waste.

	Waste category	Source
A)	Residential	(i) Food wastes, plastic, paper, glass, leather and cardboard.
B)	Industrial	(ii) Thin and thick plastics, food waste cardboard materials.
C)	Commercial	(iii) Steel materials, concrete, rubber, copper wires.
D)	Construction	(iv) Packaging wastes, ashes, chemicals can metal parts.

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

36. Nammalvar developed social forest at Ammankurai and Kolunji Ecological Farm in
(a) Trichy (b) Pudukottai (c) Karur (d) Bangalore

37. Who is an Indian soil biologist and ecologist from Tamil Nadu ?
(a) G. Nammalvar (b) Dr.Sultan Ahmed Ismail
(c) Jadav Payeng (d) Sunderlal Bahugana

38. Which method to provide a high level of long term isolation and containment without future maintenance of nuclear waste ?
(a) Spent Fuel Pools (b) Vitrification Method
(c) Geological repositories (d) All the above

39. Find out correct stages of eutrophication given below diagram G, H, I.

G	H	I
a) Oligotrophic stage	Mesotrophic stages	Eutrophic stage
b) Oligotrophic stage	Eutrophic stages	Mesotrophic stages
c) Mesotrophic stage	Oligotrophic Stages	Eutrophic stages
d) Eutrophic stage	Mesotrophic stages	Oligotrophic stages

40. Which type of waste low molecular weight organic polymers that are non-degradable organic in the natural environment ?
(a) Residential (b) Plastic waste
(c) E-waste (d) Commercial

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41. Which method is the destruction of forests in order to clear the land and make it available for other uses ?
(a) Green House Effect (b) Deforestation
(c) Ozone layer depletion (d) Global warming

42. Match the column I and column II.

P	Pape, cardboard materials	1	E-waste
Q	Spoiled food, pesticide containers	2	Biomedical
R	Sanitary napkins, urine bags	3	Ashes, can
S	Cassettes, mouse	4	Institutional
T	Industrial	5	Agriculture

a) P-4 Q-5 R-1 S-2 T-3
b) P-3 Q-2 R-1 S-5 T-4
c) P-4 Q-2 R-5 S-1 T-3
d) P-4 Q-5 R-2 S-1 T-3

43. **Statement I :** Ecological sanitation (ECOSAN) is a sustainable system for handling human excreta by using dry composting toilets.
Statement II : ECO san toilets not only reduce waste water generation but also generate the natural fertiliser from recycled human excreta, excellent substitute for chemical fertilisers
(a) Statement I is correct and II wrong
(b) Statement I and II wrong
(c) Statement I and II correct
(d) Statement I is wrong and II correct

44. "Eco san" toilets are being used in several parts of
(a) India (b) Sri Lanka (c) Both (a) and (b) (d) Japan

45. Increase in the concentration of the toxicant at successive trophic levels is known as
a) Biodeterioration b) Biotransformation
c) Biogeochemical cycling d) Biomagnifications

46. A river with an inflow of domestic sewage rich in organic waste may result in:
a) Drying of the river very soon due to algal bloom
b) Increased population of aquatic food web organisms
c) An increased production of fish due to biodegradable nutrients
d) Death of fish due to lack of oxygen

47. A lake which is rich in organic waste may result in
a) Drying of the lake due to algal bloom
b) Increased population of fish due to lots of nutrients
c) Mortality of fish due to lack of oxygen
d) Increases population of aquatic organisms due to minerals

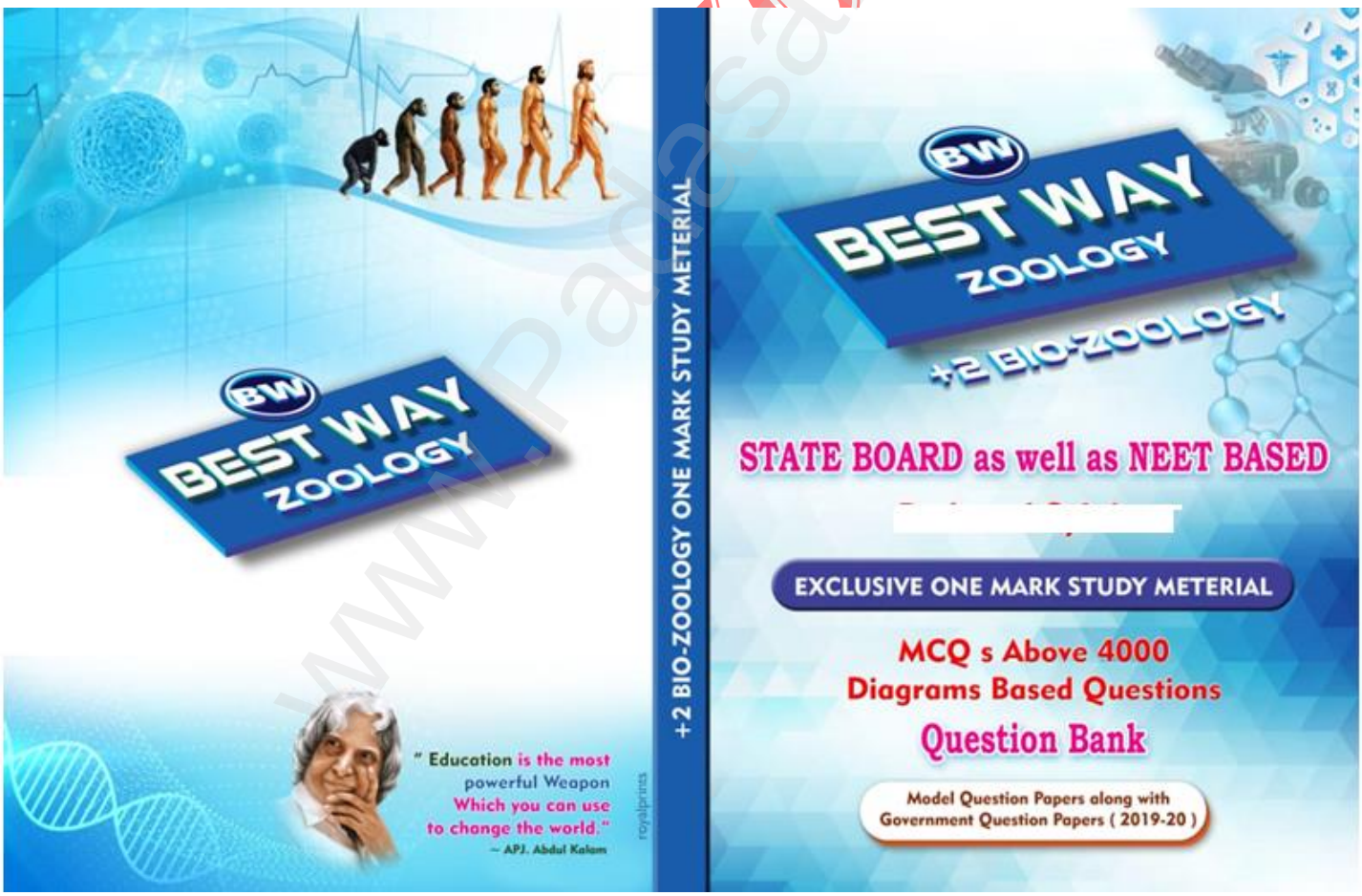
48. Which of the following in sewage treatment removes suspended solids?
(a) Tertiary treatment (b) Secondary treatment
(c) Primary treatment (d) Sludge treat

49. Acid rain is caused by increase in the atmospheric concentration of
(a) O_3 and dust (b) SO_2 and NO_2
(c) SO_3 and CO (d) CO_2 and CO ment

50. Identify the correct E-waste

A	B	C	D
a) Keyboard , Mouse	Audio/Video	Television , Monitor	Personal Electronic
b) Keyboard, Mouse	Personal Electronic	Audio/Video	Television , Monitor
c) Personal electronic	Audio/Video	Television /Monitor	Scanner/Printers
d) Personal Electronic	Television , Monitor	Audio/Video	Cell phones / Tablets

ALL THE BEST



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