Studentpad

NEET 2021-22

Time : 120 Min	Bio : Full Portion Paper	Marks : 400

01) Continuous self pollination in a species develops
1) Strong offsprings
2) Weak offsprings
3) Seedless fruits
4) New varieties

02) Statement 1 : Plasmids are double - stranded extra - chromosomal DNA.
Statement 2 : Plasmids are possessed by eukaryotic cells.
1) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
2) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
3) The statement 1 is true but the statement 2 is false
4) Both the statement 1 and statement 2 are false

03) Who owned the Nobel prize for study of communication methods of honey bees?
1) Parkinson
2) Karl Von Frisch
3) Hugo de Vries
4) Karl Korrens

04) A pigment responsible for light sensitivity in plants is
1) Carotene and xanthophyll
2) Chlorophyll
3) Cytochrome
4) Phytochrome

05) In which of the following places messenger RNA is formed in a living cell?
1) Inside nucleus but outside nucleolus
2) Inside mitochondria
3) Inside nucleolus
4) Inside endoplasmic reticulum

06) In fish, Catla catla the specific name is identical with the generic name, so it is an example of which of the following phenomena?
1) Autonym
2) Tautonym
3) Homonym
4) Synonym

07) When red blood corpuscles containing both A and B antigens are mixed with your blood serum, they agglutinate. so what is your blood group?
1) B
2) O
3) A
4) AB

08) Phylogenetic system bring out
1) Reproductive similarities
2) Grouping according to morphological characters
3) Grouping according to evolutionary trends
4) Grouping on the basis of increasing complexities

09) Statement 1 : Metamorphosis in hemichordates is an important event.
Statement 2 : In metamorphosis, the larva gradually changes into the adult.
1) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
2) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
3) The statement 1 is true but the statement 2 is false
4) Both the statement 1 and statement 2 are false

10) Statement 1 : Xylem of gymnosperms consists of tracheids and no vessels.
Statement 2 : Phloem of gymnosperms consists of phloem parenchyma, companion cells and sieve tubes.
1) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
2) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
3) The statement 1 is true but the statement 2 is false
4) Both the statement 1 and statement 2 are false

11) During the transcription, if nucleotide sequence of DNA strand, being coded is ATACG, then what would be the nucleotide sequence of mRNA?
1) TATGG
2) TATGC
3) UAUGC
4) UATGC

12) In Mucor, asexual reproduction takes place by
1) Zygospores
2) Zoogametes
3) Spores
4) Motile zoospores

13) Which in the following blood cells has a kidney shaped nucleous?
1) Eocenophil
2) Monocyte
3) Neutrophil
4) Lymphocyte

14) Mitosis is the process by which eukaryotic cells
1) Grow
2) Multiply
3) Expose the genes for protein synthesis
4) Become specialized in structure and function

15) The removal of 'keystone' species will affect which of the following componant?
1) The consumers
2) The producers
3) The ecosystem
4) The decomposers

16) Choose he correct option: Carrier ions like Na^+ facilitate the absorption of substances like
1) amino acids and glucose
2) glucose and fatty acids
3) fructose and some amino acids
4) fatty acids and glycerol

17) Pteris differs from Funaria in having
1) Dominant sporophytic phase
2) Swimming antherozoids
3) An independent gametophyte
4) Dependent sporophyte

18) _____ is a germination of seed within fruit.
1) Ovipary
2) Vivipary
3) Epigeal
4) Hypogeal

19) Match the following columns.

	Column I		Column II
a	Pleiotropy	1	Baldness
b	Polygenic inheritance	2	Pattern baldness
c	Autosomal recessive disorder	3	Thalassemia
d	Y-sex linked disorder	4	Phenylketonuria
e	Sex-influenced character	5	Hypertrichosis
f	Sex-limited character	6	Human skin colour

1)

a	b	c	d	e	f
4	6	3	5	2	1

2)

a	b	c	d	e	f
4	6	3	5	1	2

3)

a	b	c	d	e	f
6	4	5	3	1	2

4)

a	b	c	d	e	f
5	3	2	1	6	4

20) Mark the incorrect statement.
1) Species diversity increases as we move away from the equator towards the poles.
2) The historic convention on biological diversity was held in 1992.
3) Lantana and Eichhornia are invasive weed species in India.
4) Stellar's sea cow and passenger pigeon got extinct due to over exploitation by man.

21) **Statement 1:** Hibernation and aestivation are short term adaptations.
Statement 2: Aestivation is the state of remaining inactive during winter in a warm place.
1) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
2) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
3) The Statement 1 is true but the Statement 2 is false
4) The Statement 1 is false but the Statement 2 is true

22) A person is exclusively feeding on meat, egg and milk. He is probably to suffer from ____ disease.
1) Scurvy
2) Night blindness
3) Dermatitis
4) Pellagra

23) With which of the following process Cholodny-Went theory is concerned?
1) Phototropism
2) Photomorphogenesis
3) Photoperiodism
4) Photorespiration

24) Decrease in species diversity in tropical countries is mainly due to
1) Pollution
2) Urbanisation
3) Deforestation
4) Soil erosion

25) Mycoplasma reproduces through
1) Vegetative means
2) Sexual means
3) Asexual means
4) No reproduction

26) What was the duration of Mendel's hybridization experiments on garden peas plant?
1) 4 years
2) 5 years
3) 6 years
4) 7 years

27) Replication of DNA is in
1) $2' \rightarrow 5'$ direction
2) $3' \rightarrow 5'$ direction
3) Both $3' \rightarrow 5'$ and $5' \rightarrow 3'$ direction
4) None of these

28) In rainy season, the doors get wet due to
1) Imbibition
2) Absorption

3) Endosmosis
4) Diffusion

29) Parchment paper is
1) Impermeable membrane
2) Permeable membrane
3) Semipermeable membrane
4) None of these

30) _____ reactions is an example of oxidative decarboxylation.
1) Conversion of citrate to isocitrate
2) Conversion of succinate to fumarate
3) Conversion of pyruvate to acetyl CoA
4) Conversion of fumarate to malate

31) _____ inhibits the photosynthesis by blocking PS-II.
1) CMU
2) DCMU
3) PAN
4) All of these

32) Who discovered the 3-phosphoglyceric acid (PGA) as the first CO_2 fixation product in algal photosynthesis?
1) Jan Ingenhousz
2) Joseph Priestly
3) T. W. Engelmann
4) Melvin Calvin

33) Fascicular, interfascicular and extra – stelar cambium together constitute
1) Lateral meristem
2) Apical meristem
3) Ground meristem
4) Intercalary meristem

34) Mark the correct statement about protein synthesis.
1) Translation begins when mRNA attaches to small subunit of ribosome.
2) Peptidase catalyses formation of peptide bond.
3) At the end of translation, release factor binds to intiation codon.
4) UTRs are present between start and stop codons.

35) The length of a plant axis increases by
1) Apical meristem
2) Lateral meristem
3) Pleurome
4) Dermatogen

36) Snake, a terrestrial animal that excretes nitrogen wastes in the form of uric acid, is known as
1) ureotelic
2) uricotelic
3) ammonotelic
4) not confirmed for any type

37) Synthesis of RNA molecule is terminated by a signal recognised by which one of the following factor?
1) Sigma factor
2) Alpha factor
3) Delta factor
4) Rho factor

38) Low Ca^{++} in the body fluid may be the cause of _____ disease.
1) tetany
2) anaemia
3) gout
4) angina pectoris

39) Bone and muscle tumors are _____ type
1) tumor
2) sarcomas
3) carcinomas
4) lymphoma

40) _____ is the subaerial stem modification with long internode.
1) Offset
2) Rhizome
3) Runner
4) Sucker

41) **Statement 1:** Innate immunity is an inborn immunity.
Statement 2: Innate immunity involves various types of barriers that prevent entry of foreign agents into the body.
1) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
2) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
3) This Statement 1 is true, but the Statement 2 is false
4) Both Statement 1 and Statement 2 are false

42) Endoplasmic reticulum is more developed in
1) Young cells
2) Green cells
3) Mature cells
4) Bacteriophage

43) Ravi, who lived at sea level, had around 5 million RBC per cubic millimeter of his blood. Later when he lived at an altitude of 18,000 ft, showed around 8 million RBC per cubic millimeter of blood. This is an adaptation because
1) He had pollution free air to balance breathe
2) At high altitude he ate more nutritive food
3) At high altitude there is more UV radiation which enhances RBCs production
4) At high altitude O_2 level is less hence more RBCs were required to absorb enough oxygen

44) Mark the correct statement about the hormone action in humans.
1) Secretion of thymosins is stimulated with aging.
2) Glucagon is secreted by β -cells of islets of Langergans and stimulates glycogenolysis.

3) In females, FSH first binds with specific receptors on ovarian cell membrane.
4) FSH stimulates the secretion of estrogen and progesterone.

45) Which of the following statements is incorrect. Human spermatozoa normally?
1) Move with the help of their tails
2) Are released in large numbers after a few days abstinence
3) At a concentration of 1 million/ml of ejaculate will fertilize the ovum
4) Contain enzyme in their head which helps in penetration of ovum

46) How many molecules of ATP are produced per molecule of $FADH_2$ oxidized?
1) Four
2) Three
3) Two
4) One

47) Secretion of _____ is under the control of neurosecretory nerve cells.
1) adrenal cortex
2) pineal
3) anterior pituitary
4) posterior pituitary

48) The rupture of the graafian follicle and the release of ovum occurs under the influence of
1) LH
2) FSH
3) GH
4) MSH

49) The pyramid that cannot be inverted in a stable ecosystem, is pyramid of
1) Biomass
2) Energy
3) Number
4) All the above

50) In monoadelphous condition, stamens have
1) Filaments of all united in one group but anthers are free
2) Filaments united in groups but all anthers are free
3) Both anthers and filaments are fused
4) Anthers are fused but filaments are free

51) Microbes produce different types of gaseous end products during growth and metabolism. On which of the following the type of the gas produced depends upon?
1) Organic substrates utilised by microbes
2) Microbes
3) End product
4) Both a and b

52) Which one of the following is a distinctive character of class Bivalvia of the phylum Mollusca?
1) Presence of arms or tentacles around the mouth
2) Absence of a head
3) Absence of gills
4) Presence of a coiled shell

53) Barbiturates are extensively used as
1) stimulants
2) antiseptics
3) disinfectants
4) sedatives

54) Ginger plant has an underground stem which is
1) Rhizome
2) Bulb
3) Corm
4) Tuber

55) Ozone hole means
1) Same concentration of ozone
2) Hole in the stratosphere
3) Decrease in concentration of ozone
4) Increase in the concentration of ozone

56) Statement A: In cockroach the secretion of collaterial gland forms the eggs case.
Statement B: The development in cockroach is hemimetabolous.
1) Statement A is correct and statement B is wrong.
2) Both the statements A and B are correct and B is the reason for A.
3) Statement B is correct and statement A is wrong.
4) Both the statements A and B are correct and B is not the reason for A.

57) According to IUCN Red list, during the last two decades, in which of the threatened species there is the maximum increases in the number?
1) Amphibians
2) Mammals
3) Birds
4) Reptiles

58) 'Mycorrhizae' are useful for plants mainly due to their following attribute
1) Fixing atmospheric nitrogen
2) Enhanced absorption of nutrients from soil
3) Killing insects and pathogens
4) Providing resistance against abiotic stresses

59) Where the principal nitrogenous excretory compound in humans is synthesised?
1) In liver and also eliminated by the same through bile
2) In kidneys but eliminated mostly through liver
3) In kidneys as well as eliminated by kidneys
4) In the liver, but eliminated mostly through kidneys

60) During muscle contraction
1) Chemical energy is changed into electrical energy
2) Chemical energy is changed into mechanical energy

3) Mechanical energy is changed into chemical energy
4) Chemical energy is changed into physical energy

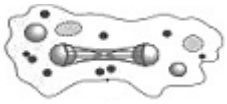
61) The enzyme required for the conduction of nerve impulses across synapse is
1) Succinic dehydrogenase
2) Choline acetylase
3) Ascorbic acid oxidase
4) Peroxidase

62) **Statement 1:**Lysosomes help in the process of photorespiration.
Statement 2: Lysosomes have basic enzymes.
1) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
2) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
3) The Statement 1 is true, but the Statement 2 is false
4) The Statement 1 is false but the Statement 2 is true

63) One set of plants of a species was grown at 12 hours day and 12 hours night period cycles and it flowered while for the other set of the same plant, night phase was interrupted by flash of light and it did not produce flower. Under _____ categories you will place this plant.
1) darkness neutral plant
2) long day plant
3) day neutral plant
4) short day plant

64) Following figures represents the process of binary fission in Amoeba.

(i) 

(ii) 

(ii) 

(iv) 

(v) 

Choose the correct sequence from the following.
1) (iii) → (iv) → (i) → (ii) → (v)
2) (iv) → (iii) → (i) → (ii) → (v)
3) (iv) → (iii) → (ii) → (v) → (i)
4) (iii) → (v) → (iii) → (iv) → (i)

65) Which is present in vascular bundles of gymnosperms?
1) Tracheids
2) Companion cells
3) Vessels
4) All of these

66) The process of exchange of O_2 from the atmosphere with CO_2 produced by the cells is known as
1) photosynthesis
2) biological respiration
3) biological assimilation
4) gaseous exchange

67) Dental formula of human being is
1) I_2, C_2, P_1, M_3
2) I_2, C_1, P_2, M_3
3) I_2, C_2, P_3, M_1
4) I_3, C_1, P_2, M_2

68) Match the following human spinal nerves in column I with the number of pair in column II and choose the correct option.

	Column I		Column II
(a)	Cervical nerves	(i)	5 pairs
(b)	Thoracic nerves	(ii)	1 pair
(c)	Lumbar nerves	(iii)	12 pairs
(d)	Coccygeal nerves	(iv)	8 pairs

1) (a)-(ii), b-(iv), (c)-(i), (d)-(iii)
2) (a)-(iv), (b)(iii), (c)-(i), (d)-(ii)
3) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
4) (a)-(i), b-(iv), (c)-(ii), (d)-(iii)

69) The plant undergoes wilting when
1) Xylem is blocked
2) Cambium is blocked
3) Some roots are reduced in number
4) Phloem is blocked

70) The Air (Prevention and Control of Pollution) Act was amended in1987 to include _____ as pollutant.
1) dust
2) noise
3) water
4) none of these

71) _____ part of the human ear plays no role in hearing as such but is otherwise very much required.
1) Organ or Corti
2) Eustachian tube
3) Vestibular apparatus
4) Ear ossicles

72) Thallophyta includes
1) Fungi and bryophyta
2) Algae and bryophyta
3) Algae, fungi and bryophyta
4) Algae and fungi

73) What are the biomass available for consumption to heterotrophs and the rate of formation of new organic matter by consumers?

1) Gross primary productivity and secondary productivity respectively
2) Net primary productivity and gross primary productivity respectively
3) Gross primary productivity and net primary productivity respectively
4) Net primary productivity and secondary productivity respectively

74) The muscles involved in the movement of the arm are
1) Unstriped
2) Striped
3) Alar
4) Cardiac

75) Define carrying capacity.
1) Minimum number of individuals which an environment can sustain
2) Maximum number of individuals which an environment can sustain
3) Both (1) and (2)
4) None of these

76) PAN (Peroxyacetyl nitrate) is an important constituent of photochemical smog. It is a
1) Natural pollutant
2) Secondary pollutant
3) Primary pollutant
4) Corollary pollutant

77) Term 'genetics' was given by
1) Boveri
2) Bateson
3) Morgen
4) Mendel

78) Which silkworm is reared on castor plants?
1) Eri silkworm
2) Muga silkworm
3) Tassar silkworm
4) Oak silkworm

79) Fibroblasts, macrophages and mast cells are found in
1) adipose tissue
2) cartilage tissue
3) areolar tissue
4) glandular epithelium

80) Statement 1 : Mitochondria is known as power house of cell.
Statement 2 : ATP production takes place here.
1) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
2) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
3) The statement 1 is true but the statement 2 is false
4) Both the statement 1 and statement 2 are false

81) The pyruvic acid formed during glycolysis is oxidized to CO_2 and H_2O in a cycle known as
1) nitrogen cycle
2) Calvin cycle
3) Hill reaction
4) Krebs' cycle

82) _____ is the main ion involved in nerve impulse transmission.
1) Ca^{2+}
2) Na^{+}
3) K^{+}
4) Mg^{2+}

83) In vertebrates the nails are formed from
1) Ectoderm
2) Mesoderm
3) Ecto-mesoderm
4) Endoderm

84) Who called water of primitive sea as pre-biotic soap?
1) Haldane
2) Fox
3) Huxley
4) Oparin

85) Metabolic poisons which alter the structure of an apoenzyme are
1) Non-competitive inhibitors
2) Product inhibitors
3) Substrate analogs
4) Competitive inhibitors

86) Starch sheath is also known as
1) epidermis
2) hypodermis
3) casparian strip
4) none of these

87) Final product of starch digestion is
1) Glucose
2) Lactose
3) Sucrose
4) Maltose

88) In over 60 % of angiosperms, pollen grains are shed at _____ stage.
1) two-celled
2) four-celled
3) three-celled
4) either A or B

89) Nitrate reductase enzyme is responsible for the formation of
1) NO_2
2) N_2
3) NO_3
4) Ammonia

90) Tip of ecological pyramid is occupied by
1) Decomposers
2) Carnivores
3) Producers

4) Herbivores

91) Mosses and ferns are found in moist and shady places because both
1) Do not need sunlight for photosynthesis
2) Require presence of water for fertilization
3) Depend for their nutrition on micro-organisms which cane survive only at low temperature
4) Can not compete with sun-loving plants

92) Match the names of glands listed under column-I with the location given under column-II, choose the answer which gives correct combination of the alphabets of the two columns

	Column - I (glands)		Column - II (location)
A)	Crypts of Lieberkuhn	p	Loop of duodenum
B)	Pancreas	q	Stomach
C)	Adrenal gland	r	Intestine
D)	Gastric gland	s	Kidney

1) A = r, B = p, C = q, D = s
2) A = r, B = p, C = s, D = q
3) A = p, B = r, C = s, D = q
4) A = q, B = s, C = r, D = p

93) The advantage in clinical use of Humulin (human insulin produced through rDNA technique) over use of conventional ox or pig insulin is
1) it does not cause immunological problems
2) it is cheaper for the patient
3) there is no advantage
4) it is produced by E.coli in our own intestine

94) Statement 1 : Sycon shows ascon type of canal system.
Statement 2 :In Sycon water passes through ostia $\rightarrow$ spongocoel $\rightarrow$ osculum.
1) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
2) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
3) The statement 1 is true but the statement 2 is false
4) Both the statement 1 and statement 2 are false

95) The following is an example of saprophytes
1) Ferns
2) Unicellular algae
3) Lichen
4) Mushroom

96) Give the correct match in the following

	Column I		**Column II**
A	Flame Cells	p	Sponges
B	Collar Cells	q	Hydra
C	Stinging Cells	r	Planaria
-	-	s	Ascaris

1) A=r,B=q, C=s
2) A=r,B=s, C=p
3) A=r,B=p, C=s
4) A=r,B=p, C=q

97) What are the 'cell of Rauber'?
1) Inner cell mass of blastocoel
2) Secretory cells of endometrium in uterus
3) Outer cells of trophoblast in contact with uterine wall
4) cells of trophoblast, in contact with inner cell mass of blastocyst

98) If a man Rh^+ marries a lady Rh^-, then
1) First child will survive
2) First child will die
3) No child will be born
4) None of these

99) Leafy or vegetative bract is characteristics of the flower of
1) Cruciferae
2) Malvaceae
3) Papilionatae
4) Liliaceae

100) In _____ myoglobin is present.
1) kidney
2) heart
3) muscles
4) nerve cells