

Studentpad

MHT-CET-XI BIOLOGY(FULL PORTION) 2022-23

Time : 180 Min

Bio : Full Portion Paper

Marks : 100

01) What is the type of epithelium found in oesophagus, cornea, vagina and urethra?

- A) Ciliated epithelium
- B) Granular epithelium
- C) Stratified columnar epithelium
- D) Stratified squamous epithelium

02) In the two bipolar spindle bodies in metaphase-II, each chromosome at the equator

- A) Has one chromatid and one centromere.
- B) Has one chromatid and two .
- C) Has two chromatids and one centromere connected to both the poles by chromosomal fibres.
- D) Two chromatids and two centromeres.

03) By _____, unicellular algae reproduces vegetatively.

- A) cell division
- B) formation of spores
- C) fragmentation
- D) fusion of gametes

04) Which one of the following is called as 'powerhouse' of the cells?

- A) Nucleus
- B) Ribosome
- C) Mitochondrion
- D) Cytoplasm

05) ___i___ is diseased condition in which a person passes out water stool frequently while ___ii___ is known as infrequent elimination of dry stool.

- A) i - Diarrhoea, ii - Vomiting
- B) i - Constipation, ii - Vomiting
- C) i - Constipation, ii - Diarrhoea
- D) i - Darrhoea, ii - Constipation

06) CO₂ joins the photosynthesis pathway during

- A) photosystem - I
- B) photosystem - II
- C) light reaction
- D) dark reaction

07) The conversion of phosphoglyceric acid into phosphoglyceraldehyde in photosynthesis is a

- A) oxidation reaction
- B) isomerization reaction
- C) reduction reaction
- D) polymerization reaction

08) Kidney of man are

- A) Mesonephric
- B) Pronephric
- C) Metanephric
- D) Telonephric

09) Proteins are involved in _____ in the cells.

A) energy transformation reactions

B) the formation of protoplasm and protoplasmic organelles

C) all biochemical reactions

D) each of the above three

10) De-energised electrons from plastocyanin finally come back to _____ in cyclic photophosphorylation.

- A) P-700
- B) plastoquinone
- C) P-680
- D) chlorophyll-a

11) Which of the following groups of scientists discovered the EMP pathway or glycolysis?

- A) Emerson, Hoffman and Peterson
- B) Embden, Morrison and Pitcher
- C) Embden, Meyerhof and Parnas
- D) Embden, Meyerhof and Parkinson

12) A- Ribosomes has been attached by rough endoplasmic reticulum

B- Smooth endoplasmic reticulum have highest number of ribosomes an surface

- A) AB are incorrect
- B) AB are correct
- C) B correct A incorrect
- D) A correct B incorrect

13) Distance between two base pairs of DNA is

- A) 20 nm
- B) 0.34 nm
- C) 10 nm
- D) 3.4 nm

14) Sodium ions are reabsorbed from the distal convoluted tubule in the presence of the hormone

- A) Cortisone
- B) Epinephrine
- C) Aldosterone
- D) Corticosterone

15) The carrier ions like Na⁺ facilitate the absorption of substances like _____ and _____.

- A) amino acids and glucose
- B) fructose and some amino acids
- C) fatty acids and glycerol
- D) glucose and fatty acids

16) During respiration 38 ATP molecules per glucose molecule are produced in respiratory chain. 22 molecules of these 38 ATP molecules are produced from NADH₂/FADH₂ during

- A) Krebs cycle
- B) respiratory chain
- C) oxidative decarboxylation
- D) embden meyerhof pathway

17) Cyclic photophosphorylation release

- A) ATP only
- B) ATP and NADPH_2
- C) NADPH_2 only
- D) ATP, NADPH_2 and oxygen

18) _____ is called as horsetail pteridophyte.

- A) Salvinia
- B) Selaginella
- C) Fern
- D) Equisetum

19) What is a hump of camel?

- A) Cartilage
- B) Bone
- C) Connective tissue
- D) Muscle

20) Which of the following statement is correct?

- A) White fibrous tissue is found in tendons
- B) White fibrous tissue provides great strength but limited or no elasticity
- C) Yellow fibre tissue provides considerable strength and remarkable elasticity
- D) All the above

21) Which of the following are earlier phanerogams?

- A) Dicotyledons
- B) Gymnosperms
- C) Pteridophytes
- D) Monocotyledons

22) As there is no _____, gymnosperms are naked seeded plants.

- A) ovule
- B) ovary and fruit
- C) fruit
- D) fertilization

23) The processes produced by posterior extensions of the centrum of vertebrae are _____.

- A) neural arches
- B) neural spines
- C) neural bodies
- D) neural canals

24) Life cycle of fasciola or liver fluke is completed in two hosts _____ and _____.

- A) man-Sheep
- B) sheep-Snail
- C) cow-Snail
- D) man-Cow

25) In which of the following, deoxy Ribose Nucleic acid is found?

- A) Nucleus and cytoplasm
- B) Nucleus only
- C) Nucleus and cell wall
- D) Cytoplasm only

26) Varanus is generally called as _____ or _____.

- A) flying lizard or goys
- B) monital lizard or wall lizard

C) garden lizard or goys

D) monital lizard or goys

27) Renin is produced by

- A) Kidney
- B) Liver
- C) Juxta Glomerular Apparatus
- D) Spleen

28) Meiosis have _____.

- A) two divisions of nucleus and two divisions of chromosomes
- B) two divisions of nucleus and one division of chromosomes
- C) one division of nucleus and one division of chromosomes
- D) one division of nucleus and two divisions of chromosomes

29) When a person is suffering from poor renal reabsorption which of the following will not help in maintenance of blood volume?

- A) decreased glomerular filtration
- B) increased ADH secretion
- C) increased arterial pressure
- D) decreased arterial pressure in kidney

30) _____ bacterium causes nephritis in young children.

- A) Streptococcus sps.
- B) Bacillus thuringiensis.
- C) Salmonella typhi.
- D) Mycobacterium sps.

31) Biological weathering of rocks is due to the formation of _____ acid.

- A) carbonic
- B) succinic
- C) acetic
- D) propionic

32) Clavicle of pectoral girdle have two process known as _____ and _____.

- A) coronoid and costal tubercles
- B) iliac and ischial tubercles
- C) greater and lesser tubercles
- D) acromion and coracoid tubercles

33) A good source of lipase is

- A) Bile
- B) Pancreatic juice
- C) Saliva
- D) Gastric juice

34) Study the following statements and mark the correct option.

- A) When protoxylem towards centre and metaxylem periphery-endarch
- B) In roots protoxylem towards periphery and metaxylem towards centre -exarch
- C) In stem protoxylem towards centre and metaxylem towards both outer & inner side mesarch
- D) Xylem fibre is wood fibre

E) The early formed xylem is called as protoxylem and later formed xylem is metaxylem

- A) A, B, E correct D, C wrong
- B) A, B, C correct D, E wrong
- C) A, D, C correct B, E wrong
- D) A, B, C, D, E correct

35) A system of classification in which a large number of traits are considered, is known as _____ system.

- A) natural
- B) synthetic
- C) artificial
- D) phylogenetic

36) Find the reason for xylem and phloem are called as complex tissue.

- A) They are made up of sclerenchyma
- B) They are only one type of cells
- C) They only gives mechanical support
- D) They are made up of many types of cells

37) One of the following statements is wrong for structure of DNA

- A) In Z-DNA there are 12 bases per turn
- B) RNA can be double stranded in few organisms
- C) DNA can be single stranded in few viruses
- D) Z-DNA is a right handed DNA

38) One of the following is most diverse molecule of the cell

- A) fat
- B) carbohydrate
- C) protein
- D) water

39) In tunicates:

- A) All chordate characters are retained from larval to adult stage
- B) Several chordate characters are lost in the at adult stage
- C) Notochord absent in larval stage but added in adult stage
- D) Additional chordate character added in adult stage

40) What is meant by fret membrane?

- A) quantasomes
- B) stroma lamellae
- C) thylakoids
- D) outer membrane of chloroplast

41) Phallic organs in Cockroach are related to

- A) Female reproductive system
- B) Female excretory system
- C) Male reproductive system
- D) Male excretory system

42) Starch and glycogen are both polymers of

- A) α - glucose
- B) fructose
- C) mannose
- D) β - glucose

43) What kind of placentation is seen in sweat pea?

- A) Axile
- B) Marginal
- C) Basal
- D) Free central

44) Coelom in Cockroach is

- A) Pseudocoel
- B) Enterocoel
- C) Schizocoel
- D) None

45) Phosphorylation in respiration is known as

- A) photophosphorylation
- B) oxidative photophosphorylation
- C) reductive photophosphorylation
- D) oxidative phosphorylation

46) Fermentation is an anaerobic production of

- A) ethers and acetone
- B) alcohol and lipoproteins
- C) protein and acetic acid
- D) alcohol, lactic acid or similar compounds

47) Colchicine is used to induce polyploidy as it _____.

- A) kills cell
- B) inhibits spindle formation
- C) inhibits meiosis
- D) inhibits centromere formation

48) Root apex has a zone of slow dividing cells in the middle of rapidly dividing cells, what is it?

- A) Dormant centre
- B) Sluggish centre
- C) Quiescent centre
- D) Nonmeristematic zone

49) Which part of the photosynthetic process does not require light and is temperature dependent?

- A) Blackman's reaction
- B) Hill's reaction
- C) Warburg's reaction
- D) Emmerson's reaction

50) In thoracic vertebrae, transverse processes are

- A) longer and light in weight
- B) shorter and light in weight
- C) longer and heavier
- D) shorter and heavier

51) Oedema condition means

- A) Fat accumulation
- B) Abnormal fluid level increase
- C) Sleeplessness
- D) Fatty liver syndrome

52) In cockroach, the number of ganglia is

- A) Three pairs thoracic and six pairs abdominal
- B) Two pairs thoracic and four pairs abdominal
- C) Two pairs thoracic and six pairs abdominal
- D) Three pairs thoracic and five pairs abdominal

53) Match the following columns.

	Column-I		Column-II
A.	Botanical garden	(i)	Preserved plant specimens
B.	Zoological park	(ii)	Preserved plant and animal specimens
C.	Museum	(iii)	Living plants
D.	Herbarium	(iv)	Living wild animals

A) A-(i), B-(ii), C-(iv), D-(iii)

B) A-(iii), B-(iv), C-(ii), D-(i)

C) A-(iii), B-(iv), C-(i), D-(ii)

D) A-(i), B-(ii), C-(iii), D-(iv)

54) The balloon like outgrowth formed by xylem parenchyma into vessels are termed as

A) bast

B) tyloses

C) callose

D) hydathodes

55) Sporic meiosis is the characteristics of all

A) Algae.

B) Sexually reproducing organisms.

C) Fungi.

D) Embryophytes.

56) What is the best stage to observe shape, size and number of chromosomes?

A) Metaphase

B) Interphase

C) Telophase

D) Prophase

57) Lenticels are involved in which of the following process?

A) Gaseous exchange

B) Transpiration

C) Photosynthesis

D) Both A and B

58) Endosperm in pinus is termed as _____.

A) diploid

B) haploid

C) polyploid

D) triploid

59) Angiotensinogen → Angiotensin

Which enzyme is used in the above conversion?

A) Angiotensin-I

B) Juxta Glomerulin

C) Angiotensin-II

D) Renin

60) Prokaryotic genetic system includes

A) DNA and no histones

B) DNA and histones

C) neither DNA nor histones

D) histones but no DNA

61) Total parasites belong to which of the following protozoan group?

A) Sarcodina

B) Zooflagellata

C) Ciliata

D) Sporozoa

62) To which kingdom on earth the most wide spread group of organisms belongs?

A) protista

B) monera

C) fungi

D) plantae

63) Where are the properly treated and preserved animal specimens maintained and displayed?

A) Herbarium

B) Biological museum

C) Botanic garden

D) Zoological park

64) Each longitudinal half of a chromosome of the late prophase is termed as _____.

A) chromatid

B) half chromatid

C) chromatin

D) chromatin fibre

65) Goblet cells are known as

A) holocrine

B) merocrine

C) mixed

D) apocrine

66) An indispensable role in energy metabolism is played by

A) sulphate

B) phosphate

C) lithium

D) calcium

67) Which of the following covers general body surface of cockroach?

A) Chitinous exoskeleton sclerite

B) Non chitinous exoskeleton carapace

C) Cellular exoskeleton cuticle

D) Non cellular exoskeleton cutin

68) Enzymes control _____ in living cells and tissues.

A) catabolic reactions

B) energy-requiring and energy-yielding reactions

C) anabolic reactions

D) all of these.

69) Myelin sheath covers _____.

A) vertebrate muscle fibre

B) nerve fibre of insect

C) vertebrate nerve fibre

D) glial cells

70) Fruit type in strawberry is a combination of

A) follicles

B) achenes

C) berries

D) drupes

71) Which is protein in nature?

- A) Silk and wool
- B) Cellulose
- C) Polyethylene
- D) Teryliene

72) 'EDTA' injected into muscle combines with Ca^{++} and _____.

- A) stimulates contraction
- B) slow down contraction
- C) stop contraction
- D) none of these

73) Commonly, Pseudopodia form in:

- A) A variety of protozoans only
- B) A variety of protozoans and leucocytes
- C) Amoeba only
- D) Amoeba and leucocytes

74) The number of spiracles in Cockroach is

- A) 20 only
- B) 10 only
- C) 13(3+10) pairs
- D) Six pairs

75) The sebaceous glands are _____.

- A) simple saccular
- B) simple branched saccular
- C) compound tubulo saccular
- D) compound saccular

76) Which of the following is the first compound that accepts carbon dioxide during dark phase of photosynthesis?

- A) NADP
- B) ferredoxin
- C) RuBP
- D) cytochrome

77) A major difference between glomerular filtrate and blood plasma is lack of

- A) proteins
- B) lipid
- C) glucose
- D) potassium

78) Match the following

	Column-A		Column-B
A	Trachids	i	Cells possess highly thickened walls with obliterated central lumen
B	Vessels	ii	Cells are living function-storage of food
C	Xylem fibres	iii	Wide pipes in xylem of angiosperm
D	Xylem parenchyma	iv	tube-like thick, lignified cells having tapering ends common in all tracheophytes

- A) A-ii, B-v, C-iii, D-i
- B) A-iii, B-v, C-ii, D-i
- C) A-v, B-iii, C-ii, D-i
- D) A-v, B-ii, C-iii, D-i

79) Crypts of Lieberkuhn are present in

- A) Stomach
- B) Oesophagus
- C) Intestine
- D) All of these

80) In stomach, acid secretion is stimulated by

- A) histamine
- B) vagal discharge
- C) gastrin
- D) all of these

81) The intestine in human body is about 29 feet long, because

- A) Bacteria containing in food may gradually be killed
- B) More length increase food digestion and absorption
- C) It provides more area for food storage
- D) None of these

82) An endoskeleton of sponges is prepared from:

- A) Bone
- B) Calcareous spicules
- C) Cartilage
- D) Calcareous or siliceous spicules, or siliceous spicules and spongin fibres or only spongin fibres

83) Coral reefs are obtained by:

- A) Echinoderms
- B) Molluscs
- C) Protozoans
- D) Coelenterates

84) _____ is present in deep sea water.

- A) Archaeobacteria
- B) Blue green algae
- C) Eubacteria
- D) Saprophytic fungi

85) The presence of sheathing leaf base and ligule are properties of

- A) grass leaf
- B) fern leaf
- C) cycas leaf
- D) banana leaf

86) The collection and labelled of pressed, dried, preserved plants mounted on paper sheet and labelled is known as

- A) plant preservation
- B) key
- C) Herbaria
- D) specimen arboretum preservation

87) Which of the following is present in monocot flowers?

- A) Petals
- B) Tepals
- C) Sepals
- D) None

88) _____ is present in both xylem and phloem.

- A) Fibres
- B) Sieve elements
- C) Vessels
- D) Tracheids

89) Instead of glucose, if fructose 1, 6-diphosphate is used as substrate for glycolysis process gain of ATP would be

- A) 10
- B) 8
- C) 4
- D) 2

90) Layers in the pollen wall are known as

- A) exoderm and endoderm
- B) exine and intine
- C) exit and entry
- D) outline and inline

91) After absorption of digested lipids by lymphatics of small intestine, these become milky, then these lipoprotein droplets are called as-

- A) Chylomicron
- B) Micelles
- C) Chyme
- D) Chyle

92) Choose correctly matched pair from the following.

- A) Interphase-A nuclear envelope set of chromosomes-encloses each haploid
- B) Prophase I-Non-homologous chromosomes are separated
- C) Anaphase I-Homologous-chromosomes are separated
- D) Metaphase I-Pairing of maternal and chromosomes takes place-paternal homologous

93) In angiosperms, flower represents ____.

- A) a strobilus
- B) a heterosporangiate cone
- C) asorus
- D) a highly modified reproductive shoot

94) A body wall of Annelida dermo muscular involved all except ____.

- A) epidermis
- B) neural cells
- C) cuticle
- D) coelomic epithelium

95) Which one of the following is incorrectly matched?

- A) Smooth muscle - Involuntary muscle
- B) Red muscle - myoglobin
- C) Troponin - Fibrous protein
- D) Myosin - Contractile protein

96) Which of the following part of sternum is cartilaginous in child hood but not ossify in adult?

- A) Xiphoid process
- B) Manubrium of sternum
- C) Whole sternum
- D) Body of sternum

97) Acetylation of pyruvate takes place in the ____

- A) cristae
- B) perimitochondrial space
- C) F_1 particles
- D) mitochondrial matrix

98) A-Blood flow in cockroach is from backward to forward

B-Due to contractions of both heart muscles and alary muscles

- A) AB both are incorrect
- B) AB both are correct
- C) A is true but B is not cause of A
- D) A is true and B is correct reason for A

99) What is true about glycogen?

- A) Is the sugar of the bond
- B) Is composed of a mixture of different hexoses
- C) Is broken down by glucagon
- D) Is broken down and synthesized using the same enzymes

100) Lichens are attached to substratum by ____.

- A) septa
- B) rhizoids
- C) roots
- D) rhizines