



BIOLOGY

NEET & AIIMS

MOCK TEST 2



 An elaborate network of filamentous proteinaceous structures present in the cytoplasm of an eukaryotic cell is called

- A. Cytoskeleton
- B. Spindle fibres
- C. Filaments
- D. Contractile filaments

Answer: A

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2. Space between the two membranes of

nuclear envelope is called

- A. Pericentriolar space
- B. Lumina! space
- C. Perinuclear space
- D. Intranuclear space

Answer: C

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3. Choose odd one w.r.t the presence of nucleus.

- A. Mature Sieve tube cell
- B. Companion cell
- C. Mesophyll cell
- D. Parenchymatous cell

Answer: A

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4. Loose and indistinct network of nucleoprotein fibres present in interphase nucleus is called

A. Chromosome

- B. Chromatin
- C. Chromonemata
- D. Chromatid

Answer: B

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5. Ribosomal RNA synthesis takes place in

A. Nucleoplasm

B. Nucleus

C. Nucleolus

D. Cytoplasm

Answer: C

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6. Read the following statements and choose the correct statements. A. Cilia and flagella are covered with plasma membrane. B. Centrioles form the basal body of both cilia as well as flagella. C. Approximately 2 m long thread of DNA is distributed among 46 pairs of chromosomes in a single human cell. D. Movement of proteins and RNA into or out of nucleus occurs through nuclear pores.

A. A, B, & D

B. A, B & C

C. B, C & D

D. A, C & D

Answer: A





7. Membrane bound minute vesicles that contain various enzymes, present in both plants and animals are called

A. Vacuoles

B. Macrobodies

C. Microbodies

D. Centrosomes







8. Total number of peripheral microtubules in flagella is (i) and in centrioles is (ii) .

A. (i)-18, (ii)-27

B. (i)-27, (ii)-18

C. (i)-20, (ii)-27

D. (i)-27, (ii)-20

Answer: A

9. The arrangement of axonemal microtubules

in eukaryotic cilia and flagella is

A. 9 + 2

B. 9 + 0

C. 18 + 2

D. 27 + 2

Answer: A



10. Choose the correct option wit the functions of cytoskeleton. a. Mechanical support b. Cell division c. Cell motility d. Maintenance of the shape of the cell e. Storage of starch

A. a, b & e only

B. a, b, c, d & e

C. b, e & d only

D. a, b, c & d only

Answer: D



11. The phase of tha cell cycle where cells remain metabolically active but usually do not proliferate is

- A. G_0 phase
- B. M-phase
- C. Quiescent phase
- D. Both (1) and (3)





12. Adult animal cell that does not divide is

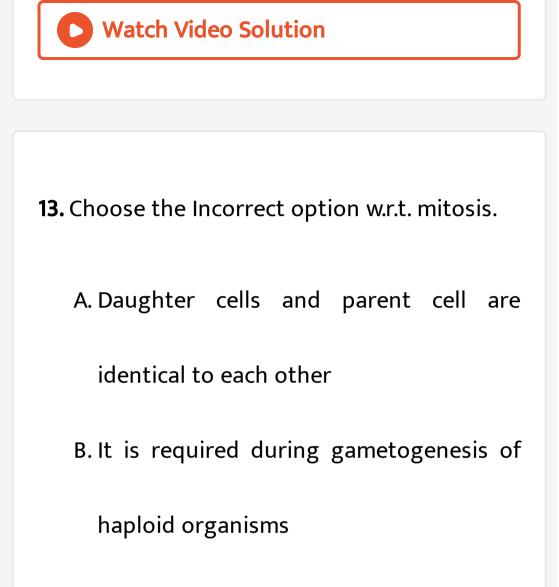
A. Skin cell

B. Hair cell

C. Stem cell

D. Nerve cell

Answer: D



C. It was first observed by Strasburger in plant cell

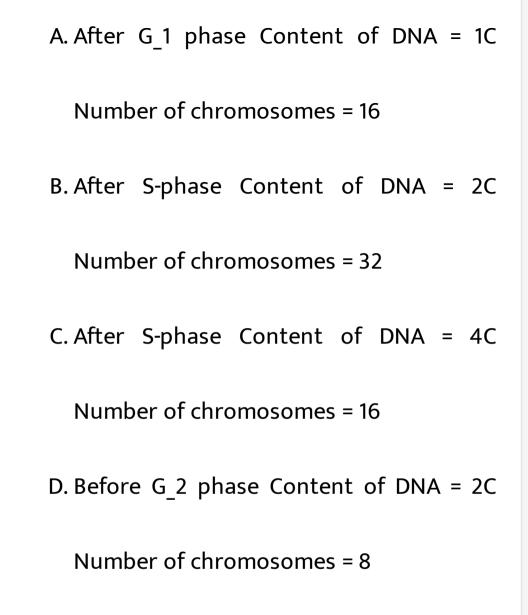
D. It does not occur in the gonad cells of

animals

Answer: D



14. If a diploid daughter cell formed after mitosis has 16 chromosomes and 2C content of DNA, what would have been the chromosome number and DNA content in its parent cell?



Answer: C

15. Continuous growth of plants throughout their life is due to

A. Mitotic division in the apical meristem

and the lateral cambium

B. Mitotic division in primary permanent

tissues

C. Production of seeds

D. Photosynthetically active cells only

Answer: A



16. The correct sequence of phases of the cellcycle is

A.
$$G_2 o S o G_1 o M$$

$${\tt B}.\,G_1 \to G_2 \to S \to M$$

$$\mathsf{C}.\,G_1 \to M \to G_2 \to S$$

D. $S o G_2 o M o G_1$

Answer: D





- A. Equational division
- **B.** Reductional division
- C. Heterotypic division
- D. Always absent in a zygote

Answer: A



18. Action spectrum of photosynthesis resembles roughly the

A. Cholorophyll a

B. Chlorophyll b

C. Carotene

D. Xanthophyll

Answer: A





19. Products of light reaction are

A. O_2 and CO_2

B. CO_2 and H_2O

C. ATP and NADPH

D. ATP and CO_2

Answer: C

20. Where does dark reaction of photosynthesis take place?

A. Thylakoid lumen

B. Thylakoid membrane

C. Stoma of the chloroplast

D. Matrix of mitochondria

Answer: C

21. Pigment molecule present at reaction centre of PS-I and PS-II respectively are

A. Chl-a and chl-a

B. chl-a and chl-b

C. chl-b and chl-a

D. chl-b and chl-b

Answer: A

22. During photosynthesis. the site for light reaction is

A. Stroma of chloroplast

B. Thylakoids of the chloroplast

C. ds circular DNA of the chloroplast

D. Both (1) & (2)

Answer: B

23. Read the following statements and choose ones- (A) Carotenoids protect chlorophyll a from photooxidation, (B) Dark reactions are not directly light driven, ©Chlorophyll a molecule shows maximum absorption in red and blue regions of the visible spectrum of light, (D) Light harvesting complexes are composed of hundreds of pigment molecules bound to lipids only.

A. A,B &C

B. B,D &C

C. A,C &D

D. D,B &A

Answer: A



24. In PS-II the reaction centre chl-a has an absorption peak at (i) wavelength of (ii) causing electrons to become excited

A. (i) 400nm, (ii) Red light

B. (i) 680nm, (ii) Red light

C. (i) 700nm, (ii) Red light

D. (i) 700nm, (ii) blue light

Answer: B

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25. The photochemical phase of photosynthesis includes,(a) water splitting (b) light absorption © oxygen release (d) synthesis of NADPH (e) synthesis of starch A. Only (a) & (b)

B. (b),© & (e)

C. ©,(d) & (e)

D. All except (e)

Answer: D

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26. The process of cyclic photophosphorylation in green algae

- A. Involves PS-I
- B. Synthesis ATP and NAPDH
- C. Takes place in the stroma lamella

membrane

D. Both (1) & (3)

Answer: D

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27. The protons and oxygen formed during photolysis of water are released

A. Within the thylakoid lumen

B. Outside the chloroplast

C. In the stroma of the chloroplast

D. In the vacuole of the cell

Answer: A

28. The electrons released during splitting of water are used to replace electrons removed

from

A. PS-I

B. PS-II

C. Cytochrome complex

D. NADP reductase complex

Answer: B

29. Cyclic photophosphorylation occurs when only light of wavelengths _____ are available.
(i) Below 680 nm (ii) Beyond 680 nm
(iii) 400 nm and below (iv) Beyond 400 nm

A. Below 300nm

B. Beyond 680nm

C. Below 400nm

D. Beyond 300nm

Answer: B

30. Non-cyclic photophosphorylation differs from cyclic photophosphorylation

A. As it requires light energy

B. In synthesis of ATP

C. As it requires only PS-I

D. As it involves photolysis of water

Answer: D

31. Biosynthetic phase of photosynthesis

A. Involves use of ATP and NADPH to form

food

B. Continues for long time if light is unavailable

C. Occurs in thylakoids only

D. Depends on light directly

Answer: A

32. The primary CO_2 acceptor molecule during

the C_3 cycle is a

A. 5-carbon ketose sugar

B. Hexose sugar

C. RuBP

D. Both (1) & (3)

Answer: D

33. chemiosmotic hypothesis

- A. Was explained by P. Mitchell
- B. Proves that proton gradient is not

required for ATP synthesis

C. Explains how ATP is synthesized in the

chloroplast

D. Both (1) & (3)

Answer: D

34. The total number of ATP and NADPH required to fix six molecules of CO_2 in C_3 plants are

A. ATP-12, NADPH-12

B. ATP-5, NADPH-3

C. ATP-18, NADPH-12

D. ATP-12, NADPH-18

Answer: C

35. How many full turns of the Calvin cycle are required to make one molecule of glucose

A. 5

B. 4

C. 12

D. 6

Answer: D



36. The most crcial step of the Calvin cycle is

A. Reduction

- **B.** Carboxylation
- C. Regeneration
- D. Decarboxylation

Answer: C

37. The most abundant enzyme on earth

A. Has much greater affinity for CO_2 than

 O_2

B. Has active site for O_2 only

C. Has carboxylase activity only

D. Both (1) & (3)

Answer: A

38. Living organisms are capable of extracting energy from (i) and store it in the form of (ii)

A. (i) Oxidisable substance, (ii) Starch only

B. (i) Light, (ii) Glucose only

C. (i) Oxidisable substance, (ii) Bond energy

D. (i) Sun directly, (ii) Bond energy

Answer: C

39. Read the following statements and mark the correct option- (i)Grana lamellae have both PS-I and PS-II, (ii) ph inside the thylakoid lumen decreases when H^+ gradient is established across thlakoid membrane, (iii) During reduction of NADP to NADPH + H^+ protons are removed from thylakoid lumen, (iv) Melvin Calvin used radioctive `14^C in a dicot plant to elucidate path of carbon in biosynthetic phase of photosynthesis.

A. (i) and (iii) are correct

B. (i) and (ii) are correct

C. (i) and (iv) are correct

D. (i) and (ii) are incorrect

Answer: B

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40. The first stable product in C_4 pathway is

A. Oxaloacetic acid

B. Phosphoenolpyruvate

C. Ribulose-1, 5-biphosphate

D. Malic acid

Answer: A



41. C_4 -plants are well adapted to

- A. Dry tropical region
- B. Temperate regions

C. Arctic regions

D. Low temperature

Answer: A

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42. Which of the following do not show Kranz anatomy in their leaves ?

A. Maize

B. Ssorghum

C. China rose

D. Both (1) & (2)

Answer: C

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43. Choose incorrect statement w.r.t mesophyll

cells of C_4 -plants

A. Lack of RuBisCO enzyme

B. C_4 -acid is broken down to release CO_2

amd a 3-carbon molecule

C. Primary CO_2 acceptor molecule is PEP

D. Have a PEP case enzyme

Answer: B

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44. In C_4 plants , numbers of ATP and NADPH molecules required to fiz 2 molecules of CO_2 are respectively

A. 6 & 10

B. 10 & 6

C.4&10

D. 10 & 4

Answer: D

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45. When C_3 plants allowed to grow O_2 enriched atmosphere ,it leads to

A. Increase in the name of photosynthesis

B. Decrease in rate of photosynthesis

C. Decrease in Photorespiration

D. Increase in rate of respiration

Answer: B

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46. Light saturation occurs at _____ of the total

sunlight available to the plants

B. 0.1

C. 0.5

D. 0.05

Answer: B

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47. Major major limiting factor for the rate of photosynthesis under the natural environmental conditions is

A. Temperature

B. Light

C. CO_2 concentration

D. Water

Answer: C

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48. Choose the correct statement w. r.t. RuBisCO

A. Binding of O_2 and CO_2 at active site is

not competitive

B. Can bind to O_2 and CO_2 with equal

affinity

- C. Participate in photo respiration
- D. A in bundle sheath cells

Answer: C

49. Select the correct statement with respect to photorespiration

A. There is neither synthesis of sugar nor

ATP

B. It results in the release of CO_2 without

utilisation of ATP

C. there is no synthesis of ATP but the

synthesis of NADPH occurs

D. it occurs in plants which have Kranz

anatomy

Answer: A



50. Photorespiration in low light intensity light

in C_3 plants is

A. high

B. negligible

C. moderate

D. very high

Answer: B



51. Choose the correct option w.r.t. optimum

temperature required for photosynthesis

A. wheat - 30°C to 40 °C

B. rice 30° - 45°C centigrade

C. Sorghum 20°-25°C

D. Maize- 30° -45° C

Answer: D



52. Read the statements carefully and choose the correct option A) heat is well adapted to tolerate high temperature. B) Bundle sheath cells of maize seeds are larger thick walled without intercellular space. C) Breakdown of C_4 acid and C_4 pathway occurs in bundle seath cells D) C_4 plants shows `CO_2 concentration mechanism A. A. B and D are correct B. B. C and D are correct C. A and D are incorrect D. B and C are incorrect

Answer: B

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53. Observe the graph between light intensity and the rate of photosynthesis. Choose the correct graph w.r.t. A,B,C,D,E mentioned in the graph. a. (A) (I) Value of light intensity after which there is no increase in the rate of photosynthesis.

A. a(iii), b(iv), c(i), d(ii)

B. a(iv), b(iii), c(i), d(ii)

C. a(iii), b(iv), c(i), d(ii) (2) a(iv), b(iii), c(i), d(ii)

D. a(iv), b(iii), c(i), d(ii)

Answer: A



54. W are substrates of protein and protoplasmic respiration respectively

A. Fat and carbohydrate

B. Protein and carbohydrate

C. Carbohydrate and protein

D. Fat and lipid





55. What is the site of glycolysis pathway in all living organisms

A. Cytoplasm in anaerobes whereas

mitochondria in aerobes

B. Mitochondria in anaerobes whereas

cytoplasm in aerobes

C. Cytoplasm in both anaerobes and

aerobes

D. Mitochondria in both anaerobes and

aerobes

Answer: C

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56. Step catalyzed by pacemaker enzyme of EMP pathway is

A. Phosphorylation of Glucose-6-phosphate

to Fructose-6-phosphate

B. Phosphorylation of Fructose-6-

phosphate to Fructose-1-6-bisphosphate

C. Phosphorylation of triose phosphate to

triose bisphosphate

D. Splitting of Fructose 1-6-bisphosphate

Answer: B

57. Choose the incorrect statement regarding glycolysis

A. The net gain of ATP in this process is 2

ATP molecules

B. During activation phase of this process, 1

mol of NADH is produced

C. Second half of this process is referred as

Pay-off phase

D. Each glucose molecule produces 2

molecules of pyruvic acid after partial

oxidation

Answer: B

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58. Which of the following reaction involved substrate - level phosphorylation ?

A. 1, 3-bisphosphoglyceric acid rarr 3

phosphoglyceric acid

B. Glyceraldehyde 3-phosphate rarr 1. 3-

bisphosphoglyceric acid

C. Phosphoenolpyruvate rarr

phosphoglycerate

D. Fructose-6-phosphate rarr Fructose-1, 6-

bisphosphate

Answer: A

59. What is the mineral activator involved in transition reaction of aerobic respiration ?

A. Cu^2+`

- $\mathsf{B.}\,Fe^2 + \\$
- $C. Mn^2 +$
- D. Mg^2 +

Answer: D

60. End product of anaerobic respiration is

A.	Dihydroxy acetone phosphate	2 phosphoglycerate	Ethanol
В.	Dihydroxy acetone phosphate	2 phosphoglycerate	Acetaldehyde
C.	Glyceralde- hyde-3 phosphate	Phosphoenol pyruvic acid	Ethanol
D.	Glyceralde- hyde-3 phosphate	Phosphoenol pyruvic acid	Acetaldehyde

Answer: C



61. What is the net gain of ATP molecules in alcoholic and lactic acid fermentation , respectively?

- A. 2,4
- B. 3,2
- C. 2,3
- D. 2,2

Answer: D



62. Succinate dehydrogenase enzyme is found

A. In mitochondrial matrix

- B. On outer mitochondrial membrane
- C. on inner mitochondrial membrane
- D. In ribosomes

Answer: C

63. _____ is the 5C DCA molecules of citric acid

cycle.

A. Succinic acid

B. Oxalosuccinic acid

C. alpha'-ketoglutaric acid

D. Fumaric acid

Answer: C

64. Statement A: Kreb's cycle takes place in the matrix of mitochondria. Statement B: TCA cycle is an amphibolic process.

A. Only statement A is correct

B. Only statement B is correct

C. Both statements A and B are incorrect

D. Both statements A and B re correct

Answer: D

65. In animal cells, like muscles during exercise, when oxygen is inadequate for cellular respiration pyruvic acid is reduced to lactic acid by

A. Lactate dehydrogenase

B. Pyruvic acid decarboxylase

C. Alcohol dehydrogenase

D. Pyruvate thiokinase

Answer: A

66. What is the maximum concentration of alcohol which can lead to death of yeasts?

A. 0.23

B. 0.06

C. 0.13

D. 0.26

Answer: C

67. How many 'H_2 O' molecule are involved in

oxidation decarboxylation and Kreb's ctcle?

A. 1

B.4

C. 5

D. 6

Answer: B

68. What is the reducing agent in alcoholic fermentation ?

A. FADH

B. Ethanol

C. NADH + 'H^+'

D. 'CO_2'

Answer: C

69. RQ value depends on

A. Type of respiratory substrate

B. Type of oganism

C. Presence of light

D. Absence of 'CO_2'

Answer: A

70. Choose the incorrect statement for electron transport systemA. Enzyme complex-I accepts te elctrons

and 'H⁺' from NADH

B. Cytochrome C is attached to the outer

surface of inner membrane of

mitochondria

C. Complex-II contains two copper centres

D. Complex-V is coupled to ATP synthase

enzyme

Answer: C



71. Select the wrongly matched pair

A. Acetyl CoA - Gibberellins

B. Succinyl CoA - Chlorophyll

C. alpha'-ketoglutaric acid - Amino acid

D. Oxaloacetic acid

Answer: D

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72. The malate-asparate shuttle is absent in

A. Kidney cells

B. Prokaryotes

C. Brain cells

D. Both (2) & (3)





73. Which of the following substrate have maximum RQ value

A. Fat

- B. Carbohydrate
- C. Prptein
- D. oxalic acid

Answer: D



74. Select the incorrect statement w.r.t. growth.

A. It is an irreversible permanent increase in size of an organ

B. I It is accompanied by metabolic

processes

C. In living organisms, growth is from

inside

D. In animals and plants, growth is seen

onlyupto a certain age

Answer: D

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75. Formation of cork cambium is___(i) ___ while formation of secondary cortex and cork is (ii) A. (i) Differentiation (it) Dedifferentiation

B. (i) Dedifferentiation (ii)Redifferentiation

C. (i) Redifferentiation (ii) Dedifferentiation

D. (I)Dedifferentiation(ii) Redifferentiation

Answer: B

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76. Heterophylly under different environmental

conditions is shown by

A. Butter cup

B. Cotton

C. Coriander

D. Larkspur

Answer: A



77. Two leaves A and B are increasing their surface area by 7 cm^2 in one day. Their initial size was A = $7cm^2$ and B = 70 cm^2 . Choose

correct option w.r.t.their absolute growth and

relative growth.

A. Absolute growth rate of A is equal to

absolute growth rate of B while relative

growth rate of A

B. Absolute growth rate of A is greater than absolute growth rate of B while relative growth rate of A is equal to relative growth rate of B C. Absolute growth rate of A is less than

absolute growth rate of B while relative

growth rate of A is less than relative

growth rate of B

D. Absolute growth rate of A is equal to

absolute growth rate of B while relative

growth rate of

Answer: A

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78. Mark the intrinsic factor that influences the

development of a plant.

A. PGRS

B. Genetic complement

C. Nutrition

D. Both (1) & (2)

Answer: D

79. Read the following statements and choose the correct ones A.Increase in length of a plant organ againt time gives sigmoid curves B. Incase of microorganisms showing geometric growth, all the daughter cells divide C. Environmental factors like light and gravity affects different stages of growth of plants. D. A tree showing seasonal activities doesnot show a typical S-shaped curve.

A. A, B & C are correct

B. B, C & D are correct

C. A, B & D are correct

D. Only B is correct

Answer: B

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80. Choose the correct statement w.r.t. geometric growth

A. Can be exemplified by growth pattern of

roots

B. Can't be sustained for long time under

natural environmental condition

C. Out of two only a one daughter cell

divides continuously

D. Both (1) and (2)

Answer: D

81. Cells having ability to divide and self-perpetuate are

A. Cork cells

B. Parenchyma cells

C. Meristematic cells

D. Bark cell

Answer: C

82. Cells that usually do not divide but may gain the ability to divide at specific growth stage of plant is

A. Meristematic

B. Differentiated cell

C. Dedifferentiated cell

D. Redifferentiated cell

Answer: C

83. Precursor of cytokinin is

- A. A pyrimidine
- B. A purine
- C. Carotenoid
- D. Methionine

Answer: B



84. A plant hormone that is used to kill dicotyledonous weed and is also known as 'Agent Orange' is derived from

A. Tryptophan

B. Phenylalanine

C. Acetyl CoA

D. Modified purines

Answer: A

85. The phenomenon of apical dominance is a result of

- A. Secretion of auxin by apical bud
- B. Secretion of auxin by axillary bud
- C. Accumulation of auxin at adventitious

bud

D. Accumulation of auxin at growing apices

of root and shoot







86. Which of the following is not found naturally in plants?

A. NAA

B. IBA

C. Kinetin

D. Both (1) and (3)

Answer: D

87. Choose incorrect option w.r.t. Ethephon.

A. It is an aqueous solution

B. It is used as source of ethylene

C. It is used to hasten fruit ripening in

tomatoes and apples

D. It is a natural ripening compound

Answer: D

88. Choose correct one w.r.t. respiratory climactic.

- A. Sudden sharp rise in rate of respiration
- B. Induced by cytokinins
- C. Occur at the time of flowering
- D. Decrease in rate of respiration in

dormant seeds

Answer: A



89. Phytohormone that helps seeds to withstand desiccation and other unfavourable conditions is

A. Ethylene

B. Auxin

C. Gibberellin

D. ABA





90. choose correct pairs of PGRs showing antagonistic effects.

(A) ABA and GAs for seed germination

(B) ABA and GAs for stomatal closure

(C) Auxin and cytokinin for apical dominance

A. (A), (C) and (D)

B. (B), (C) and (D)

C. (C) and (D) only

D. (B) and (D) only

Answer: A



91. Match Column I with column II and choose

the	correct		option	
	Column I		Column II	
a.	Ethylene	(i)	Promotes synthesis of chloroplast	
b.	Auxin	(ii)	Promotes bolting	
c.	Cytokinin	(iii)	Xylem differentiation	
d.	Gibberellin	(iv)	Horizontal growth of seedlings.	option.

A. a(iv), b(i), c(iii), d(ii)

B. a(ii), b(i), c(iii), d(iv)

C. a(ii), b(i), c(iv), d(iii)

D. a(iv) ,b(iii), c(i), d(ii)

Answer: D

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92. Read the following staisiients. A. ABA is derived from violaxanthin and is also known as anti GA hormone. B. Ethylene increases the number of male flowers. C. Extrinsic factors like

temperature and light control plant growth and development via PGRs. D. GA, is used to speed up the malting process in brewing industry Choose the correct option.

A. Only A is incorrect

B. Only B is incorrect

C. A, B and C are incorrect

D. B, C and D are incorrect

Answer: B

93. Choose the correct option. A. (__i) is used to initiate flowering and for synchronising fruit set in pineapples B. (__ii) is also known as stress hormone. C. (__iii) is used to induce early seed production in conifers and for increasing sugar yield in sugarcane

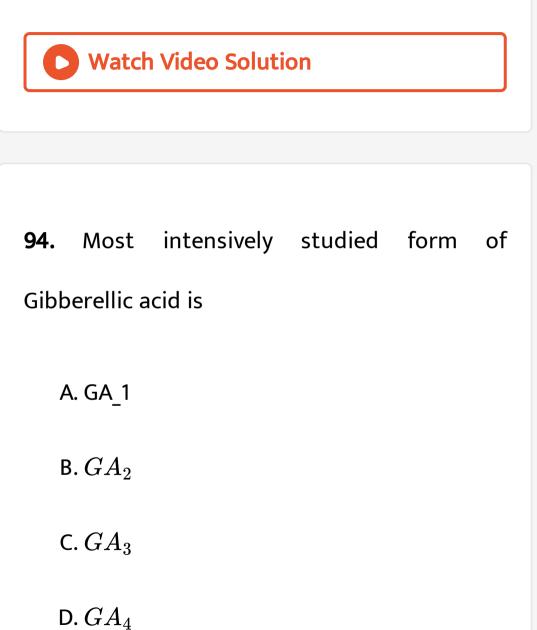
A. (i) Ethylene, (iii) Auxin

B. (ii) Ethylene, (iii) Cytokinin

C. (ii) ABA, (iii) GA

D. (ii) GA, (iii) ABA

Answer: C







95. Site of synthesis of cytokinin is

- A. Region of maturation of root
- B. Region of active cell division
- C. Region of active photosynthesis
- D. Region of fully differentiated cells

Answer: B



96. Along with auxin, which PGR is used to induce proliferation of cells in callus,

A. GA

B. Cytokinin

C. ABA

D. Florigen

Answer: B





97. Suspension of seed germination due to

endogenous factors is

A. Quiescence

B. Dormancy

C. Vivipary

D. Both (1) & (2)

Answer: B

98. Read the following statements. A. Scarification of seed involves softening and weakening of seed coat. B. Stratification of seed is subjecting the moist seeds to high pressure. Choose correct option

A. Only A is true

B. Only B is true

C. Both A and B are true

D. Neither A nor B are true

Answer: A



99. During seed germination which of the following part of embryonal axis grows first in hypogeal germination?

A. Epicotyl

B. Hypocotyl

C. Cotyledons

D. Both (1) & (2)

Answer: A



100. How many of the following shows epigeal seed germination?[Cucurbits, Rice, Mustard, Mango, Castor, Gram, Onion, Beans, Groundnut]

A. Seven

B. Six

C. Eight

D. Five

Answer: D

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101. The stimulus of photoperiodism is perceived by

A. Leaves

B. Shoot apex

C. Lateral meristem

D. Flowers

Answer: A

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102. Movement of leaves in touch me not plant

is

A. Thigmotropism

B. Nyctinasty

C. Thigmonasty

D. Seismonasty

Answer: D

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103. Seed i.e. positive photoblastic is

A. Tobacco

B. Onion

C. Lily

D. Phlox





104. Stimulus of vernalisation is perceived by

A. Mature stem apex

- B. Embryo of the seed
- C. Leaves
- D. Both (1) and (2)

Answer: D



105. Choose incorrect statement w.r.t. Rhizophora.

A. Shows precocious seed germination

B. Develop respiratory roots

C. Grow in saline marshy habitat

D. Show seed dormancy

Answer: D



106. Read the following statements and choose the correct ones. A. Light always inhibits seed germination. B. Optimum temperature for seed germination is 10-15degC. C. Photoperiodism and vernalisation both are main phenomenon involved in flowering. D. Vernalisation can shortens the period between germination and flowering.

A. A and B

B. B and C

C. C and D

D. A and D

Answer: C

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107. Who first discovered the effect of photoperiod on flowering?

A. F. W. Went

B. Kurosawa

C. Yabuta and Cousins

D. Garner and Allard

Answer: D

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108. Choose correct statements writ. phytochromes. A. They absorbs both far-red and red lights B. The P_r form is physiologically active and is present in cytosol C. The P_(fr) form is physiologically active and is attached

to plasma membrane D. For LDP P_(fr)/P_r > 1

A. A, B and C are correct

B. A, C and D are correct

C. A, B and D are correct

D. B and D are correct

Answer: B

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109. Select correct statement w.r.t. florigen.

A. It is formed in leaves and shoot apeices
B. When exposed to the inductive photoperiod florigen migrates from leaves to shoot apex
C. Initial flowering occurs without

migration of florigen to the shoot apex

D. It is not a plant hormone

Answer: B



110. Choose the correct statement. A. Cotyledons remain inside soil in epigeal type of seed germination. B. Cotyledon comes above the surface in hypogeal type of seed germination. C. Plants growing in saline marshes do not propagate through seeds as surrounding environment do not favours any sort of seed germination.

A. Only B is correct

B. Only C is correct

C. Both B and C are incorrect

D. Both A and B are incorrect

Answer: A

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111. How many among the following can have lifespan of more than 100 years Tortoise, Crocodile, Elephant, Horse, Peepal tree, Parrot, Crow, Banyan tree A. 2

B. 3

C. 4

D. 5

Answer: C

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112. Select the incorrect statement

A. Life span are not necessarily correlated
with size or complexity of organisms.
B. Some multicellular organisms are
immortal.
C. Life span is specific trait of each
organism

D. Life span of mango tree is much shorter

than that of peepal tree

Answer: B

113. Read the following statements w.r.t clone. and identify the correct statements. a . Individuals are exact copies of each other and their parents b. Involves mitotic as well as meiotic division. c. Group of morphologically and genetically similar individuals. d. Individual member of clone is referrod as "ramet."

A. a, b, c & d

B. a & c only

C. a, b & d

D. a, c & d

Answer: D

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114. Select the odd one w.r.t natural methods of reproduction.

A. Rhizome in Banana

B. Offset in water hyacinth

C. Root cuttings in Blackberry

D. Aerial shoots in Opuntia

Answer: C

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115. Select the incorrect statement w.r.t asexual reproduction

A. It can occur with or without gamete

fusion

B. It can occur through unspecialised or

speciallised parts of the parent.

C. Simple and quick method of reproduction

D. Common mode of reproduction in lower

organisms

Answer: A

116. Read the following statements:

Statement 1: Zoospores are microscopic motile spores formed inside sporangia. Statement 2: Conidia are non flagellated motile spores formed over conidiophore.

A. Both statements 1 & 2 are correct

B. Only statement 1 is correct

C. Only statement 2 is correct

D. Both statements 1 & 2 are incorrect

Answer: B



117. Which of the following statement is correct w.r.t runner in grasses.

A. Short horizontal branch producing cluster of leaves above and cluster of roots below.

B. Lateral branch creeps below the soil surface and grows obliquely upward.

C. Elongated, prostrate, subaerial branch
with short internodes
D. Elongated, prostrate, subaerial branch
with long internodes and have

adventitious roots at nodes.

Answer: D

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118. Vegetative propagatation in Pistia is a

- A. Underground stem
- **B.** Subaerial stem
- C. Underground root
- D. Aerial stem

Answer: B



119. Select the incorrect statement w.r.t. Eichhornia

A. Its propagation takes place by breaking

of offsets.

B. It was introduced in Bengal because of

its beautiful flowers and stems

C. It grows in stagnant water

D. Highly invasive aquatic weed referred as

"Terror of Bengal"

Answer: B

120. Which of the following type of vegetative

reproduction is found in century plant?

A. Bulbils

B. Runner

C. Sucker

D. Rhizome

Answer: A

121. Select the odd one out w.r.t. adventitious

bud?

A. Foliar bud

B. Cauline bud

C. Extra axilary bud

D. Radical bud

Answer: C

122. Adventitious buds in roots and leaves help in vegetative reproduction of _____ and ____plants respectively

A. Adiantum and Kalanchoe

B. Begonia and century plant

C. Dahlia and walking fern

D. Dahlia and Ananas

Answer: C

123. _____is the pre-requisite for successful cuttings?

A. Induction of shoots

B. Induction of leaves

C. Induction of roots

D. Both (1) & (2) are correct

Answer: C

124. Mark the incorrect statement w.r.t. layering.

A. It is carried out on one year old basal

shoot branches commonly during

summer or autumn season

B. In trench layering, basal branch is pegged in a horizontal position which develops into a number of vertical shoots C. Tip layering is artificial method of vegetative reproduction in blackberry
D. In air layering, grafting clay is made of one part cow dung, one part linely cut hay or moss and two parts clay

Answer: A

125. Select the correct statement in context of

sexual reproduction.

A. Slow and elaborate process

B. It can be both uniparental as well as

biparental

C. Involves syngamy

D. More than one option is correct

Answer: D

126. Method of raising new plants from a small plant tissue with the help of tissue culture technique is referred as

A. Layering

B. Grafting

C. Micropropagation

D. Gootee

Answer: C

127. Read the following statements: Statement-1: Shoe flower is a polycarpic perennial plant which bears flowers throughout the year. Statement-2: Interflowering period is recovery phase in monocarpic plants. Select the correct option.

A. Both statements 1 & 2 are correct

B. Both statements 1 & 2 are incorrect

C. Only statement 2 is correct

D. Only statement 1 is correct

Answer: D



128. Read the following statements: a. Interaction between hormones and environmental factors regulates the reproductive process. b. Strobilanthus kunthiana is a polycarpic plant. c. Gamete is a sex cell that contains haploid set of chromosomos. d. Jackfruit is a monocarpic plant. e. Term gamete was given by Gregor

Johann Mendel. Select the correct option:

A. b, c, d & e

B. a, c, & d

C. a, c, d & e

D. a, c & e

Answer: D



129. In a plant Mangifera indica, gamete is

transferred through

A. Water

B. Pollen

C. Chemicals

D. Both 1 & 2

Answer: B

130. Select correct option w.r.t. heterogametes

of algae. Cladophora, Chlamydomonas, Fucus,

Ulothrix, Volvox, Chara, Spirogyra

A. 5

B. 6

C. 2

D. 3

Answer: D



131. Which one is mismatched? Organisms Life

span

A. Elephant 90 years

B. Crocodile 60 years

C. Crow 120 years

D. Parrot 140 years

Answer: C

132. The chromosome number in meiocyte of

an adder's tongue fern is

A. 380

B. 630

C. 660

D. 1260

Answer: D

133. Male and female sex organ of Chara are

respectively called as

A. Globule and nucule

B. Nucule and globule

C. Archegoniophore and antheridiophore

D. Oogonium and antheridium

Answer: A

134. How many terms in the column is associated to stonewort? Protandrous, Gynandrous, Shield cells, Coronary cells, Tube cells, Archegoniophore, Globule, Monoecious

A. 5

B. 6

C. 7

D. 4





135. Which one of the following is the first cell

of the new generation in all sexually reproducing organisms?

A. Embryo

B. Zygote

C. Gamete

D. Spore



136. Select odd statement w.r.t asexual reproduction.

A. It does not involve fusion of gametes

B. It is a slower method of multiplication

C. New individuals are generally similar to

the parents

D. It does not introduce variability



137. Zoospores are

- A. Always exosporous
- B. Motile or nonmotile
- C. Usually naked
- D. More than one options are correct

Answer: C

138. Select the incorrect statement:

A. Flowers are morphological and embryological marvels and sites of sexual reproduction. B. Several hormonal and structural changes take place prior to development of floral primordium

C. The distal end of the filament is attached

to the thalamus or the petel of the

flower.

D. Flowers are objects of aesthetic,

ornamental, social, religious and cultural

value

Answer: C



139. Out of the 4 whorls of flower, which of the following are sterile? (a) androecium (b) gynoecium © calxy (d) corolla

A. (a) & (b)

B. (b) only

C. Only (c)

D. (c) & (d)

Answer: D

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140. Which layer in Arceuthobium has fibrous

thickening and it is called?

- A. Exothecium
- B. Endothecium
- C. Middle layer
- D. Tapetum

Answer: A



141. Select the correct statement w.r.t anther.

(a) Anther lobes are attached to each other by

a band of vasculated sterile tissue. (b) Fibrous

bands are present in Hydrocharitaceae. (C) Microsporangia on maturity get filled with pollen grains (d) Homogeneous mass of meristematic cells in microsporangium form microspore mother cells. (e) Cells of middle layers nourishes the developing pollen grains

A. a, b, c, d

B. a, c, d

C. a, c, d, e

D. b, d, e

142. Select the incorrect statement w.r.t tapetum. (a) Cells of tapetum are polyploid. (b) Amoeboid tapetum provides ubisch bodies which helps in ornamentation of exine. (C) Tapetal cells show increase in their DNA content. (d) Innermost layer of another surrounds the sporogenous tissue. (e) Glandular tapetum secretes sporopollenin, pollenkit and compatibility proteins

A. (b) & (e)

B. (b), (d), (e)

C. (a), (c), (e)

D. Only (b)

Answer: D



143. In cells of endothecium, a-cellulosic

fibrous bands arise from

- A. Outer radial wall
- B. Inner tangential wall
- C. Outer tangential wall
- D. Both on inner and outer tangential walls

Answer: B

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144. Which of the following layer helps in dehiscence of anther due to its hygroscopic nature?

- A. Exothecium
- B. Epidermis
- C. Endothecium
- D. Middle layers

Answer: C



145. Which of the following cytokinesis after meiosis in PMCs is considered as advanced type?

- A. Simultaneous type in monocots
- B. Successive type in monocots
- C. Successive type in dicots
- D. Simultaneous type in dicots

Answer: B

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146. Select the correct statements w.r.t pollen grain (a) Its sporoderm consists of exine and intine (b) Has exine whice helps in fossilization

(c) Generally spherical shaped with about 25-50 um in diameter (d0 It can be stored in liquid N2 for years (e) Its viability does not depend on temperature and humidity.

A. a, b, d, e

B. b, c, d, e

C. a, b, c, d

D. b, c, a, e

Answer: C



147. Intine is composed of

A. Chitin and pectin

B. Cellulose and pectin

C. Cellulose and hemicellulose

D. Lignin and pectin

Answer: B

148. Select the correct option w.r.t. division required for formation of 3-celled mature male gametophyte from pollen mother cell.

A. 2 mitotic and 2 meiotic divisions

B. 1 meiotic and 3 mitotic divisions

C. 1 meiotic and 2 mitotic divisions

D. 2 meiotic and 2 mitotic divisions

Answer: C

149. What is the most common and primitive

type of ovule, respectively?

A. circinotropous and campylotropous ovule

B. Amphitrophous and orthotropous ovule

C. Orthotropous and anatropous ovule

D. Anatropous and orthotropous ovule

Answer: D

150. In which of the following kinds of ovules, the embryo sec is horse-shoe shaped

A. Campylotropous ovule

B. Amphitropous ovule

C. Circinotropous ovule

D. Hemi-anatropous ovule

Answer: B

151. The matured embryo sac of Oenothera is

A. 4 cellede & 4 nucleated

B. 8 cellede & 8 nucleated

C. 7 cellede & 8 nucleated

D. 7 cellede & 7 nucleated

Answer: A

152. In an embryo sac, the largest cell is

A. Synergids

- B. Antipodal cells
- C. Central cell
- D. Oosphere

Answer: C



153. Which of the following does not ensure

aytogamy in viola?

A. Cleistogamy

B. Homogamy

C. Bud pollination

D. Dichogamy

Answer: D

154. Geitonogamy is functionally_____

&

genetically_____.

A. Autogamy, allogamy

B. Allogamy, autogamy

C. Allogamy, xenogamy

D. Autogamy, autogamy

Answer: B

155. Sea grass is an example for

A. Epihydrophily

B. Hypohydrophily

C. Anemophily

D. Entomophily

Answer: B

156. Queens of bombus affinis is ______ for

Aquilegia spurs.

A. Pollinator

B. Pollen Robber

C. Nectar Robber

D. More than one option is correct

Answer: D

157. Presence of pollen kift is adaptation for

A. Ophiophily

B. Ornithophily

C. Entomophily

D. Chiropterophily

Answer: C

158. Ploidy level of polar nucleus and definitive

nucleus is respectively

A. N & 3N

B. N & N

C. N & 2N

D. 2N & 2N

Answer: C

159.7 celled-8 nucleate embryosac is

A. Monosporic

B. Bisporic

C. Tetrasporic

D. All of these

Answer: D

160. Pollination between flowers borne on two

different plants of the same species refers to:

A. Xenogamy

B. Geitonogamy

C. Autogamy

D. Homogamy

Answer: A

161. In a majority of aquatic plants, flowers

Remain submerged in water

Emerge above the level of water

Are pollinated by water

Are pollinated by insects or wind

A. A & C

B. B & D

C. B & C

D. A & D





162. Primate like lemur is pollinator of plant.

A. Flax

B. Ravenela

C. Zostera

D. Aquilegia

Answer: B

163. Which one is mismatched?

A. Anemophilous flower - Uniovulate ovary

B. Hydrophilous flower - Long sticky stigma

C. Entomophily - Bombax

D. Chiropterophily - Adansonia

Answer: C

164. Select odd one w.r.t anemophily.

A. Maize & wheat

B. Wheat & sugarcane

C. Bamboo & Zostera

D. Both (2) & (3)

Answer: C

165. Which of the following plants prevent autogamy but not geitonogamy?

A. Vallisneria

B. papaya

C. castor

D. cannabis

Answer: C

166. Read the following statements w.r.t. outbreeding devices. Discourage self pollination. Prevent loss in genetic variation. Different placement of anther and stigma which prevents autogamy is referred as dichogamy. Failure of pollen grain's germinatioin in bisexual or monoecious plants is a genetically controlled mechanism.

select the correct option.

A. a, b & c

B. a, b, c & d

C. b, c & d

D. a, b & d

Answer: D



167. Which of the following are protandrous

and protogynons flowers, respectively?

A. Sunflower & cotton

B. Ficus & Aristolochia

C. Cotton and Ficus

D. Ficus ?& sunflower

Answer: C



168. Which of the following is observed in casuarina?

A. Mesogamy

B. Chalazogamy

C. Porogamy

D. More than one option is correct

Answer: B

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169. Who observed pollen tube in portulaca for

the first time

A. S.G. Nawaschim

B. Guignard

C. Strasburger

D. G.B. Amici

Answer: D



170. in which of the following plants, triple

fusion and double fertillization was discovered?

A. Portulaca & Cucurbit

B. Lillium & Fritillaria

C. Triticum & Lily

D. Fritillaria & Colocasia

Answer: B

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171. Fusion of male gamete and definitive nucleus results in the formation of

A. Primary endosperm cell

B. Primary endosperm nucleus

C. Zygote

D. Secondary nuclei

Answer: B

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172. Select the correct option w.r.t. plant with

cellular mode of endosperm development.

A. Cotton

B. Maize

C. Groundnut

D. Petunia

Answer: D

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173. Select the odd one out w.r.t. exalbuminous seed.

A. Groundnut

B. Beans

C. Barley

D. Pea

Answer: C

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174. Which of the following plants have stony

endosperm?

A. Castor and groundnut

B. Areca nut and phoenix dactyiifera

C. Wheat and coconut

D. Barley and date palm

Answer: B

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175. Select the odd one out w.r.t. ruminate endosperm.

A. Maize

B. Passiflora

C. Annona

D. Myristica

Answer: A

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176. Who discovered effect of foreign pollen on

somatic tissue present outside the

endosperm?

A. Strasburger

- B. Focke
- C. Swingle
- D. Guignard

Answer: C

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177. Xenia effect was first observed in

A. Wheat

B. Groundnut

C. Pea

D. Maize

Answer: D

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178. Which among the following plant has diploid endosperm?

A. Betal nut

B. Oenothera

C. Date palm

D. Phoenix

Answer: B

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179. The structure of flower which forms pericarp in true fruit is

A. Thalamus

B. Outer integument of ovule

C. Stalk

D. Wall of ovary

Answer: D

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180. In dicotyledonous embryo, the cylindrical portion below the level of cotyledons which terminates into root tip is

A. Hypocotyle

B. Epicotyle

C. Plumule

D. Redicle

Answer: A

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181. In grass family, the cotyledon is called:

A. Scutellum

B. Proembryo

C. Procambium

D. Dermatogen

Answer: A

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182. one of the examples of seeds in which the endosperm is completely consumed during embryo development is A. Pea

B. Maize

C. Wheat

D. Sunflower

Answer: A



183. Which of the following conditions show

that the embryo of a seed is entering the state

of dormancy?

Dry weight of seed is increasing

Watercontent is reducing.

The general metabolic activity of embryo is slowing down.

oxygen consumption of seed is increasing.

A. A and b only

B. A,B and D

C. B and D only

D. B and C only

Answer: D





184. Plants developed from apomictic embryos of a plant are

A. Genetically different to each other

B. Morphologically similar to each other

but genetically different from parent

plant

C. Different to each other w.r.t. their ploidy

D. Genetically identical to each other as

well as to their parent

Answer: D

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185. After double fertilization, most zygotes divide only after certain amount of endosperm is formed. One of the importance of this adaptation is A. To push the developing embryo out of the micropyle B. To prevent the developing zygote from being divided into many embryos C. To provide assured nutrition to the developing embryo D. To provide sufficient space for developing embryo by dissolving outer and inner integuments of ovule

Answer: C



186. The first cell of suspensor towards micropyle is called

A. Vesicular cell

B. Hausrorial cell

C. Hypophysis

D. Both (1) & (2)

Answer: D





187. The remains of second cotyledon occur in

some grasses it is called

A. Scutellum

B. Epiblast

C. Coleoptile

D. Hypocotyle

Answer: B

188. In some plants, megaspore mother cell does not divide by meiotic division, instead from an unreduced embryosac, containing diploid egg cell. This condition is referred as

A. Sporophytic budding

B. Polyembryony

C. Recurrent agamospermy

D. Parthenocarpy

Answer: C



189. Which one of the following plants have many seeds in their fruits?

A. Orchid and striga

B. Orobanche and orchid

C. Mango and banana

D. both (1) & (2)

Answer: D





190. Which one is mismatched?

- A. true fruit -Mango
- B. False fruit -cashewnut
- C. Parthenocarpic fruit -Banana
- D. Fleshy fruit -Mustard

Answer: D

191. The oldest seed of Lupinus arcticus excavated from arctic Tundra was germinated and flowered after an estimated record of —

— of domancy.

A. 2,000 years

B. 10,000 years

C. 20,000 years

D. 1,00,000 years

Answer: B

192. Sporophytic budding is found in

A. Citrus

B. Pear

C. Apple

D. Both (2) & (3)

Answer: A

193. One of the causes of variation known by

early agriculturists, was hidden in

A. Formation of deploid gametes

B. Fusion of identical gametes

C. sexual reproduction

D. Both (1) & (2)

Answer: C

194. Successfully bred domesticated varieties from while plans and elements are obtained through

A. Artificial selection

B. Selective crossing

C. Emasculation

D. all except (3)

Answer: D

195. A field of pea has plants bearing both yellow and green seeds green sheet colour is preferred, which of the following cross if performed repatedly has a higher probability for obtaining pure line for green seed colour?

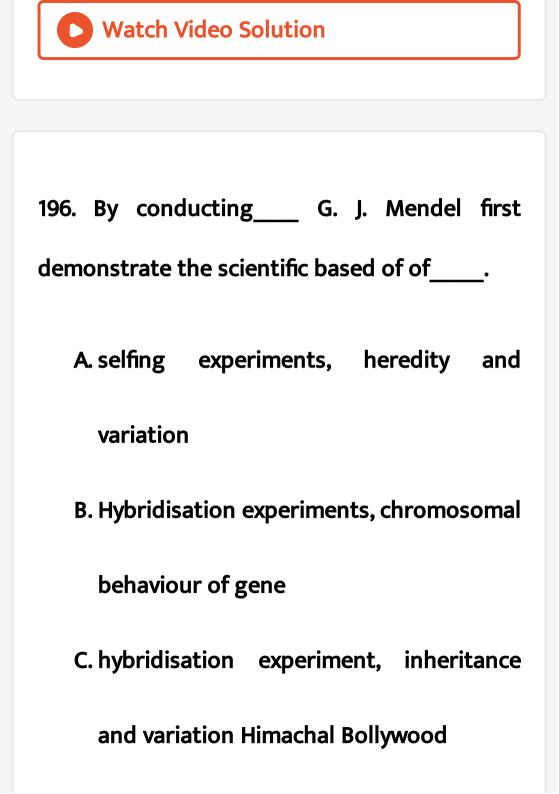
A. YY imes YY

B. $Yy \times YY$

C. Yy imes yy

D. Yy imes Yy

Answer: C





interaction

Answer: C



197. mendelian experiments were infact the extension and development of hybridisation experiments on pea conducted by

A. Knight only

B. Goss only

C. Naudin only

D. Both Knight and goss

Answer: D

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198. select odd one out w.r.t recessive trait in

pea plant

A. green seed colour

- B. green pod colour
- C. yellow pod colour
- D. white flower colour

Answer: B

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199. Term 'Pure line' was coined by

A. Mendel

B. Johannsen

C. Bateson

D. T.H. Morgan

Answer: B



200. which of the following trait of garden pea

is not present on 4th chromosome?

A. flower position

B. stem height

C. pod shape

D. pod colour

Answer: D



201. Mark the incorrect statement w.r.t law of

segregation

A. Each gamete contains only one allele for

a gene

B. The two alleles present in the F1 generation segregate during random fusion of gametes, thus giving 3 : 1 ratio C. Each gamete is always pure for its/a trait D. The recessive trait which is not observed in the F_1 generation reappears in F_2 generation

Answer: B

202. Mendel failed to obtain the same results

on

A. Hawkweed

B. Lablab

C. Cucurbita pepo

D. Both (1)&(2)

Answer: D

203. Who coined the term 'haterozygous'?

A. Bateson

B. Saunders

C. Jahannsen

D. All except (3)

Answer: D

204. who gave mendelian inclusions the shape

of laws?

A. Carl Correns

B. Hugo de Vries

C. Tschermak

D. All of these

Answer: A

205. For hetrozygous tall plant of pea undergoing selfing, what would be the sum of phenotype and genotypes obtained in F_1 generation?

A. 2

B. 5

C. 3

D.4

Answer: B



206. Percentage of inflated pod, wrinkled seed and axial flower obtained in F_2 generation of Mendel's monohybrid cross are respectively

A. 75%, 75%, 25%

B. 25%, 50%,75%

C. 75%,50%,25%

D. 75%,25%,75%

Answer: D

207. In a mendel's monohybrid cross for the shapes of pea seeds,1600 seeds were obtained in F_2 generation. What will be the number of round seed and hybrid round seed, respectively?

A. 1200 & 800

B. 800 & 1200

C. 400 & 1200

D. 1200 & 400





208. When F_1 program shown intermediate phenotype between dominant and recessive phenotypes such as gene interaction is called

- A. Complete dominance
- B. Over dominance
- C. pseudodominance
- D. Incomplete dominance





209. phenotypic and genotypic ratios are equal in

A. incomplete dominance

B. Test cross

C. All monohybrid crosses

D. Both (1)&(2)

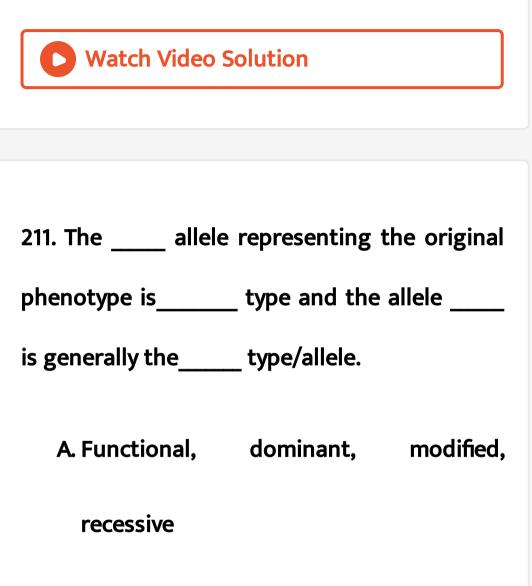
Answer: D



210. white eye mutation leads to depigmentation in many parts of the body in Drosophila. it is referred as

- A. Multiple alletes
- **B. Polymorphic effect**
- C. pleiotropic effect
- D. Morphan syndrome

Answer: C



B. unmodified, wild, modified, mutant

C. modified, wild unmodified, recessive

D. Both (1) & (2)

Answer: D

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212. When a corss is made pink flowered and red flowered snapdragon plants, what proportion of phenotypein the offspring could be expected to be

A. 0.25

B. 0.75

C. 0.5

D. 0.125

Answer: C

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213. Presence of more than two alleles for a gene in a population is referred as

A. Mutant alleles

- **B. Multiple alleles**
- C. isoalles
- D. Pseudoalleles

Answer: B

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214. select the set of parents that cannot produce child with blood group 'O'

A.
$$I^A i imes I^A i$$

B. $I^B i imes I^A I^A$

$\textbf{C.}\,ii\times I^Ai$

D. `I^BI^B × I^AI^B

Answer: A

215. Human beings have	alleles for ABO
blood grouping with	phenotypes
and genotypes.	

A. 4,3,6

B. 4,6,3

C. 3,4,6

D. 6,3,4

Answer: C



216. Theoretically, the modified allele could be responsible for the production of A. a non

functional enzyme B. normal or less effecient

enzyme C. No enzyme at all

A. A only

B. A & B only

C. B only

D. A,B and C

Answer: D

217. For ABO system of blood group in humans, allele I^A produces _____ enzyme.

A. N- acetylgalactosamyl transferase

B. Glactosyl transferase

C. N- muramic transferase

D. NAG & NAM

Answer: A

218. Most of the annelids are

A. Terrestrial

B. Free living

C. Ectoparasites

D. Endoparasites

Answer: B



219. Locomotory structure of Leech is/are

A. Parapodia

B. Setae

C. Muscle

D. All of these

Answer: C

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220. Choose the correct match

A. Nereis – Internal fertilisation

B. Pheretima – Internal fertilisation

C. Hirudinaria – Internal fertilisation

D. Ascaris – External fertilisation

Answer: C

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221. Excretory waste of Pheretima is

A. Ammonia

B. Urea

C. Uric acid

D. Both (1) & (2)

Answer: D



222. Consider the following characteristic features. (a) Closed vascular system (b) External fertilisation (c) Dioecious (d) Double ventral nurve cord The above features characterise

A. Leech

- **B. Earthworm**
- C. Sandworm
- D. Bloodworm

Answer: C



223. Which of the following is a sanguivore

and characterised by the presence of

botryoidal tissue?

A. Tubifex

- **B. Aphrodite**
- C. Megascolex
- D. Hirudinaria

Answer: D



224. Read the following features: (a) Neurogenic heart (b) Haemocoel (c) Parapodia with setae is locomotory structure (d) Double ventral nurve cord Which of the above is/are

characteristic features of Nereis?

A. only (a)

B. (a) and (c) only

C. (c) and (d) only

D. (a) , (c) and (d)

Answer: D

225. Trochophore larva is a free swimming larva in

A. Nereis, Aphrodite, Chaetopterus

B. Nereis, Pheretima, Pontobdella

C. Tubifex, Bonellia, Hirudinaria

D. Pheretima, Lumbricus, Megascolex

Answer: A

226. Which of the following cannot be considered as characteristic feature of arthropods?

A. Jointed appendages

B. Direct development

C. Schizocoelom

D. Bilateral symmetry

Answer: B

227. Which of the following is a correct match

between organism and its respective

respiratory structure?

A. Prawn — Tracheal system

B. King crab — Book lungs

C. Scorpion — Gills

D. Centipede — Tracheal system

Answer: D

228. Read the following statements. Statement (A) : Malpighian tubules help in removal of nitrogenous waste from body fluid. Statement (B) : Nitrogenous waste is removed out through separate excretory pore. Choose the correct option

A. Both statements (A) and (B) are correct

B. Statement (A) is incorrect and (B) is

correct

C. Statement (A) is correct and (B) is incorrect D. Both statements (A) and (B) are incorrect Answer: C Watch Video Solution

229. Which of the following statements is correct regarding arthropods?

A. In all arthropods fertilisation is internal but development may be direct or indirect

B. Grub is the larval from of mosquitoes

C. Arthropods are mostly monoecious

D. Nymph resembles the adult in mode of

life but differs in structure

Answer: D

230. Which of the following organisms exhibits

hemimetabolous development?

A. Cockroach

B. Bed bug

C. Lice

D. May flies

Answer: A

231. Which of the following is not present in

life cycle of Locusts?

A. Egg

B. Nymph

C. Naiad

D. Imago

Answer: C

232. Which of the following structures in mosquitoes help in perceiving vibrations?

A. Johnston's organs present on last

abdominal segment

B. Halters present on antennae

C. Johnston's organs present on antennae

D. Halters present on 2nd pair of wings

Answer: C

233. Which of the following mouth parts occurs in pair?

A. Labium

B. Mandible

C. Labrum

D. Hypopharynx

Answer: B

234. Which of the following statements is incorrect regarding honey bees?

A. Bee wax is produced by abdominal glands of workers

B. Except queen bee all castes are sterile

C. Scout bees perform round dance when

food source is located at <75m

distance

D. Potential queen larvae are given royal jelly while the rest of larvae are given

bee bread

Answer: B

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235. Which of the following is an incorrect match of vector and the disease it transmits?

A. Xenopsylla — Bubonic Plague

B. Culex — Elephantiasis

C. Aedes — Dengue

D. Phlebotomus — Sleeping sickness

Answer: D

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236. Which of the following is not a beneficial

insect?

A. Apis

B. Laccifer

C. Locusta

D. Bombyx

Answer: C

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237. Which of the following givens the correct description of various structures present in a

class?









Answer: B



238. Which of the following is not a member of

class Insecta?

A. Crayfish

B. Silverfish

C. Glow worm

D. Aphid

Answer: A



239. Consider the following statements

(a) In both crustaceans and insects body is divisible into cephalothorax and abdomen.
(b) In millipedes throacic and abdominal segments bear 2 pairs of legs.

(c) Tehmina is the other name for metathoracic wings of insects.
(d) Peripatus is a connecting link between Annelida and Arthropoda.
How may among the above mentioned statements is/are correct?

A. 4

B. 3

C. 1

D. 2

Answer: C



240. Which of the following is not a semelparous organism?

A. Pacific salmon

B. Lamprey

C. Spider

D. Cow

Answer: D





241. In Vorticella during binary fission plane of

division passes along

A. Any plane of organism

- B. Transverse axis of organism
- C. Longitudinal axis of body
- D. At an angle to transverse axis of body

Answer: C

242. Which of the following cannot be considered as function of sexual reproduction?

A. Introduces variation

B. Avoids ageing

C. Replaces organisms lost due to

predation

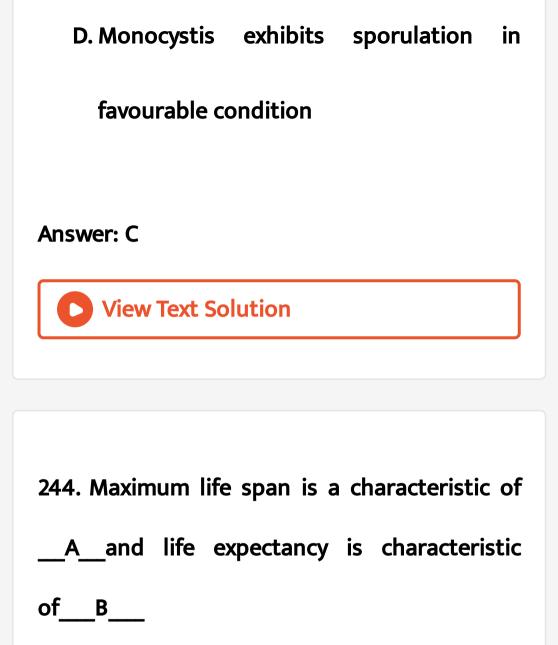
D. Helps in continuation of species

Answer: B



243. Which of the following statements is incorrect?

A. Formation of gametes may or may not occur in somatogenic reproduction
B. Proter and opisthe are results of binary fission in Paramoecium
C. Sexual reproduction is always biparental



A. A. Individual B. Population

B. A. Population B.Species

C. A.Species B.Population

D. A.Species B.Individual

Answer: C

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245. During unfavourable conditions A moeba

exhibits

A. Binary fission

- **B. Encystation**
- C. Sporulation
- D. Both (2) and (3)

Answer: B

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246. Among the following organisms which one has the shortest life span?

A. Elephant

B. Giant Tortoise

C. Swan

D. Parrot

Answer: A

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247. Which of the following organisms do(es). Not exhibit internal budding? (a) Yeast (b) Sycon (c)Spongilla (d) Hydra A. b & d

B. a & d

C. b & c

D. Only d

Answer: B

D View Text Solution

248. Which of the following is a incorrect match between organism and is mode of

Reproduction

A. Taenia solium Fragmentation

- **B.** Monocystis Multiple fission
- C. Gonyaulax Oblique binary fission
- **D. Syllis Budding**

Answer: A

249. Fusion of gametes is also known as

A. Syngamy

B. Fertilization

C. Both (1) & (2)

D. Apomixis

Answer: A



250. Drones in honey bee produce gametes by

A. Meiosis

B. Mitosis

C. Cleavage

D. Amitosis

Answer: B



251. In which of the following organisms self

fertilization is seen?

A. Sharks

B. Roundworm

C. Earthworm

D. Tapeworm

Answer: D

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252. In which of the following organisms fertilization is internal but development of zygote occurs outside the body of female?

A. Frog

B. Bony fishes

C. Birds

D. Dog dish

Answer: C

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253. Consider the following statements: a. All oviparous organisms exhibit external fertilization. b. Hermaphrodites can show cross fertilization. c. New individual can develop from ovum (without fusion with sperm) d. Embryogenesis involves cell division, cell differentiation and dedifferentiation Which of the above mentioned statements are incorrect?

A. a & c

B. b & d

C. a & d

D. b & c

Answer: C



254. Read the following statements: Statements-1: Viviparous organisms give birth to their young ones. Statement-2: In viviparous organisms embryo gets nourishment from yolk. Choose the correct option.

- A. Both statements 1 & 2 are correct
- B. Both statements 1 & 2 are incorrect
- C. Statement 1 is incorrect and 2 is correct
- D. Statement 1 is correct and 2 is incorrect

Answer: D

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255. Which of the following is not a part of

duct system of female reproductive system?

A. Uterus

- **B.** Fourchette
- C. Both (1) & (2)
- D. Vagina

Answer: B

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256. Greater vestibular glands are

A. Paraurethral glands

B. Skene's glands

C. Bartholin's glands

D. Both (1) & (2)

Answer: C

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257. In human males, tunica albuginea is the collagenous covering of testis but in females

A. It is the outermost covering of ovaries

B. It is the outermost layer of ovarian

foilicles

C. It separates two zones i.e. medulla and

cortex of stroma in ovary

D. It surrounds ovarian cortex

Answer: D

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258. Read the following statements.

statement - 1 : vagina acts as birth canal along

with cervix

Statement - 2 : It is line by non-keratinised

stratified cuboidal epithelium

Choose the correct option.

A. Both statements are correct

B. statements 1 is correct and 2 is incorrect

C. statements 1 is incorrect and 2 is correct

D. Both statements are incorrect





259. Which of the following is a correct match ?

A. Mesosalpinx ightarrow attaches ovary to

abdominal cavity

B. Endometrium ightarrow avascular and

glandular layer of uterus

C. Mesometrium \rightarrow mus	cular layer of	f
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uterus

D. Ampulla \rightarrow sit of fertilization

Answer: D

View Text Solution

260. Corpora cavernosa is found in

A. Clitoris

B. Mons veneris

C. Penis

D. Both (1) and (3)

Answer: D



261. Which of the following pairs of organs is

not homologous?

A. Labia majora and scrotum

B. Labia minora and foreskin

C. Clitoris and penis

D. Cowper's gland and Bartholin's gland

Answer: B



262. Scrotum remains connected to abdominal

cavity by

A. Inguinal canal

B. Gubernaculum

C. Epididymis

D. Both (1) and (2)

Answer: A



263. Secretion from which of the following

cells inhibits the development of paramesonephric duct in males?

A. Interstitial cells

B. Sertoli cells

C. Spermatogonia

D. Spermatozoa

Answer: B

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264. Which of the following is not a part of

intra-testicular duct system?

A. Tubuli recti

B. Proximal part of ductuli efferentes

C. Roto tostis

D. Epididymis

Answer: D

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265. Gubernaculum is a fibrous cord that

connects

A. Caput-end of epididymis to scrotal wall

B. Caput-end of epididymis to abdominal

cavity

C. Testes to abdominal cavity

D. Caudal end of epididymis to scrotal wall

Answer: D

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266. Which of the following statements is correct?

A. Choir boys were often castrated to					
retain their high-pitched voice.					
Castration led to deficiency in LH and					
FSH					
B. 20-25 vasa efferentia confluent to form a					
folded and coilded tube called					
epididymis behind each testis.					
C. Secretion of prostate gland is rich in					
prostaglandins, inositol, fructose and					
ca^{2+} ion					

D. Blood testis barrier is formed by

formation of tight junctions between

sustenlacular cells.

Answer: D

View Text Solution

267. Ejacaiatory duct is formed by union of

A. Duct from seminal vesicle, vas deferens

and glandular part of urethra

B. Duct	from	prostat	e gland	and	
membranous urethra					
C. Duct	from s	eminal v	vesicle ar	ıd vas	
defere	ins				
D. Duct	from Co	owper`s g	land and	penile	

urethra

Answer: C

View Text Solution

268. Which of the following is an incorrect match regarding gland, its location and secretion?

A. Prepulal gland , skin around penis neck,SmegmaB. Prostate gland, Lies at base of urinary

bladder, Alkaline component of semen

C. Cowper's gland, Adjacent to urethra at

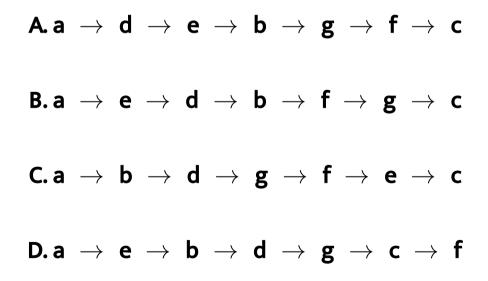
the base of penis, Viscous mucus which

acts as lubricant

D. Seminal, In front of urinary bladder, Major components of samen like fructose citic acid Answer: D **View Text Solution** 269. While moving through the male reproductive system sperm passes through following structures

a. Seminiferous tubule

- b. Epididymis
- c. Urethra
- d. Rete testis
- e. Vasa efferentia
- f. Ejaculatory duct
- g. Vas deferens



Answer: A



270. Which of the following cell undergoes first meiotic division during spermalogenesis?

A. Spermatogonium

B. Primary spermatocyte

C. Secondary spermatocyte

D. Spermatid

Answer: B



271. Milk secreted by the alveoli of mammary lobes travels through the following structures to the exterior.

Lactiferous duct

Mammary ducts

Mammary ampulla

Mmmary tubule

identify the correct sequence.

A. 1 - 2 - 3 - 4

D. 4 - 2 - 3 - 1

Answer: D

View Text Solution

272. Spermatidus are transformed into

spermatozoa by the process of

A. Spermiogenesis

B. Spermiation

- C. Spermatogenesis
- D. Spermatolysis

Answer: A

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273. Which of the following represents the correct number of chromosomes in various cell that are mentioned below?

A. 23 - 23 - 23 - 23

B. 46 - 23 - 23 - 23

C. 46 - 23 - 23 pairs - 23

D. 23 pairs - 23 pairs - 23 - 23

Answer: D

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274. Which of the following provides energy

for the movement of sperm in mammals?

A. Tail only

B. Middle priece only

C. Head only

D. Tail and middle piece

Answer: B

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275. Which of the following structures in sperm helps in the first cleavage of a fertillised

egg?

- A. Proximal centriole
- **B.** Distal centriole
- C. Acrosome
- D. Both (1) & (2)

Answer: A



276. At puberty total number of primary follicles in each ovary of human female is about A. 80000

B. 600000

C. 160000

D. 1600000

Answer: A

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277. Which of the following is a component of

secondary follicle?

- A. Theca interna
- B. Secondary oocyte
- C. Cumulus oophorus
- D. Primary oocyte

Answer: D

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278. Zona pellucida is secreted by

A. Primary oocyte

B. Secondary ooctye

C. Corona radiata

D. Ootid

Answer: B

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279. First meiotic division of oocyte is completed in

A. Primary follicle

B. Secondary follicle

C. Tertiary follicle

D. Graafian follicle

Answer: C

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280. Choose the correct math w.r.t. nenstrual

cycle.

A. Follicular phase - Low concentration of

estrogen

B. Secretory phase - Low concentration of

progesterone

C. Luteal phase - Shedding of endometrial

lining

D. Proliferative phase _ Increase in

thickness of endometrium lining

Answer: D

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281. Second meiotic division during oogenesis is completed in

A. Ovary

B. Graafian

C. Fallopian tube

D. Tertiary follicle

Answer: C

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282. Secondary oocyte formation occurs in

A. Secondary follicle

B. Graafian follicle

C. Fallopaians tube

D. Uterus

Answer: B



283. Which of the following is an example of

monoestrous animal?

A. Mouse

B. Squirrel

C. Horse

D. Bat

Answer: D

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284. Which of the following is diploid?

A. Primary oocyte

B. oogonium

C. Secondary oocyte

D. Both (1) & (2)

Answer: D



285. Which of the following is secreted by follicular cells during proliferative phase?

A. Estrogen

B. Inhibin

C. FSH

D. Both (1) & (2)

Answer: D

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286. Choose the correct match.

A. LH - Corpus luteum

B. Estrogen - Ovarian follicle

C. Progesterone - Zona pellucida

D. FSH - Ovary

Answer: B



287. which of the following is correct regarding the location and event that occurs during capacitation of sperms? A. Epididymis (location) & Maturation of sperm (Events) B. Male urethra (Location) & Gain in sperm motility (Events) C. female reproductive tract (Location) & chemical changes in sperms which

prepare it to fertilize ovum (Events)

D. Vas deferens (Location) & Loss of sperm

tail (Events)

Answer: C



288. which of the followin enzyme helps sperm

to penetrate zone pellucida ?

A. hyaluronidase

B. corona penetrating enzyme

C. fertilizin

D. acrosin

Answer: D



289. which of the following event is/are included in fast block to prevent polyspermy?

A. zona reactions

B. depolarization of ovum membrane

C. cortical reaction

D. closing of Na⁺ chanels of the ovum

membrane

Answer: B

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290. The event that triggers the formation of

ootid is

A. binding of sperm head to receptors (

ZP3) on zona pollucida

B. Entry of sperm into secondary oocyte

C. Cortical reaction

D. Entry of sperm into fallopian tube

Answer: B

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291. A leads to mixing of genetic material of male and female which is known as B, which result is formation of C. Fill in the above blanks with suitable option

A. fertilization (A) & syngamy (B) & Synkaryon (C)

B. Fertilization (A) & Apomixis (B) & Embryo

C. Syngamy (A) & Amphimixis (B) & Synkaryon (C)

⁽C)

D. Syngamy (A) & Apomixis (B) & Synkaryon

(C)

Answer: C



292. During embryonic development of human,

second cleavage is completed after about

A. 30 hours of fertilization

B. 60 hours of fertilization

C. 72 hours of fertilization

D. 48 hours of fertilization

Answer: B

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293. which of the following is correct regarding cleavage division?

A. cleavage divisions are resulting in

formation of blastomeres

B. cleavage divisions in mammals are slow

and synchronous

C. during cleavage there is increase in DNA

:cytoplasm ratio

D. zona pellucida breaks after 3rd cleavage

division

Answer: C

294. in mammals embryo proper is formed from

A. trophoblast

B. inner cell mass

C. Cells of Rauber

D. Cytotrophoblast

Answer: B

295. in humans implantation usually occurs at

A. morula stage

B. gastrula stage

C. blastocyst stage

D. Zygote Stage

Answer: C

296. portion of endometrium lying between

chorionic villi and myometrium is

A. Decidua basalis

B. Decidua capsularis

C. Decidua vera

D. Decidua parietalis

Answer: A

297. which of the following events marks the beginning of gastrulation?

A. differentiation of inner cell mass into

epiblast and hypoblast

B. formation of three germ layers

C. formation of primitive streak

D. formation of chorionic villi

Answer: C

298. find the odd one w.r.t germ layers which

form the following structures?

A. Gonads

B. Adrenal cortex

C. kidneys

D. Iris muscle

Answer: D

299. presence of which hormone is diagnosed

in Gravidex test?

A. hCG

B. hPL

C. Chorionic thyrotropin

D. Estrogen

Answer: A

300. which of the following statements is incorrect?

A. placenta is formed by structures contributes by both mother and fetus B. TORCH infections are major cause of miscarriage in first trimester C. Relaxin facilitates parturition by softening bones of public symphysis

D. there is no mixing of material and foetal

blood occur during foetal development

Answer: C

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301. which of the following is correct regarding embryonic development?

A. Heart sound of the foetus can be heard

using stethoscope usually after four

week of gastation

B. First movement of foetus occurs just

after 3rd month

C. Implantation occur at morula stage

D. Allantois serve as site of blood cell

synthesis in foetal stage

Answer: A

302. Descending of testis into scrotal sac occur during

A. 3rd month of gestation

B. 5th month of gestation

C. 7th month of gestation

D. after birth of foetus

Answer: C

303. Which extra embryonic membrane in human prevents desccation of embryo inside uterus ?

A. Amnion

B. Chorion

C. Allantois

D. Yock sac

Answer: A