

# **BIOLOGY**

# **BOOKS - TRUEMAN BIOLOGY**

# NEET (UG)- 2017 (Conducted by CBSE on 07-05-2017)



**1.** Which one of the following statements is correct with reference to enzymes

- A. Apoenzyme = Holoenzyme + Coenzyme
- B. Holoenzyme = Apoenzyme + Coenzyme
- C. Coenzyme = Apoenzyme + Holoenzyme
- D. Holoenzyme = Coenzyme + Co-factor



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**2.** Which cells of Crypts of Lieberkuhn secrete antibacterial lysozyme ?

- A. Argentaffin cells
- B. Paneth cells
- C. Zymogen cells
- D. Kupffer cells



- **3.** PEP is primary  $CO_2$  acceptor in
  - A.  $C_3$  plants

- B.  $C_4$  plants
- C.  $C_2$  plants
- D.  $C_3$  and  $C_4$  plants



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**4.** Match the following (Column -I) with the (Column - II) and select the Correct option.

Column-I Column-II (a) Pistils fused (i) Gametogenesis together (b) Formation of (ii) Pistillate gametes (c) Hyphae of higher (iii) Syncarpous Ascomycetes (d) Unisexual female (iv) Dikaryotic flower

b c d

iii iv I

b c d

В. iii iv ii I b c d  $\mathbf{a}$ C. ivii iii T  $\mathrm{d}$ b c  $\mathbf{a}$ 

iii

 $\mathbf{a}$ 

ii

 $\mathbf{a}$ 

iv

**Answer:** 



**5.** Which among the following are the smallest living cells, known without a definite cell wall, pathogenic to plants as well as animals and can survive without oxygen?

A. Bacillus

B. Pseudomonas

C. Mycoplasma

D. Nostoc

# **Answer:**

**6.** Which one from those given below is the period for mendel's hybridization experiments?

A. 1856 - 1863

B. 1840 - 1850

C. 1857 - 1869

D. 1870 - 1877

# **Answer:**

7. Flowers which have single ovule in the ovary
and are packed into inflorescence are usually
pollinated by

- 1. Water
- 2. Bee
- 3. Wind
- 4. Bat
  - A. Water
  - B. Bee

C. Wind

D. Bat

# **Answer:**



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**8.** Asyptote in a logistic growth curve is obtained when

A. The value of 'r' approaches zero

B. K=N



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**9.** Out of 'X' pairs of ribs in humans only 'Y' pairs are true ribs. Select the option that correctly represents values of X and Y and provides their explanation

- A. x=12 , y=7 True ribs are attached dorasally to vertevral column and ventrally to the sternum
- B. x=12, y=5 True ribs are attached dorasally to vertevral column and sternum on the two ends
- C. x=24, y=7 True ribs are attached dorasally to vertevral column but are free on ventral side

D. x=24, y=12 True ribs are attached dorasally to vertevral column but are free on ventral side

# **Answer:**



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**10.** MALT constitutes about\_\_\_\_\_ percent of the lymphoid tissue in human body

A. 0.5

B. 0.2

C. 0.7

D. 0.1

# **Answer:**



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**11.** Homozygous purelines in cattle can be obtained by

A. mating of related individuals of same breed.

B. mating of unrelated individuals of same breed.

C. mating of individuals of different breed.

D. mating of individuals of different species.

#### **Answer:**



**12.** Among the following characters, which one was not considered by mendel in his experiments on pea?

- A. Stem-Tall of Dwarf
- B. Trichomes -Glandular or non-glandular
- C. Seed -Green or Yellow
- D. Pod -Inflated or Constricted

#### **Answer:**



**13.** Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP?

- A. Lysosome
- B. Ribosome
- C. Chloroplast
- D. Mitochondrion

#### **Answer:**



14. if there are 999 bases in an RNA that codes for a protein with 333 amino acids, and the base at position 901 is deleted such that the length of the RNA becomes 998 bases, how many codons will be altered?

**A.** 1

B. 11

C. 33

D. 333

# Answer:

**15.** Which of the following are found in extreme saline conditions?

A. Archaebacteria

B. Eubacteria

C. Cyanobacteria

D. Mycobacteria

**Answer:** 

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**16.** Receptor sites for neurotransmitters are present on

A. membranes of synaptic vesicles

B. pre-synaptic membrane

C. tips of axons

D. post-synaptic membrane

**Answer:** 



**17.** Artificial selection to obtain cows yielding high milk output represents

A. stabilizing selection as it stabilizes this character in the population.

B. directional as it pushes the mean of the character in one direction.

C. disruptive as it splits the population into two, one yielding higher output and the other lower output.

D. stabilizing followed by disruptive as it stabilizes the population to produce higher yielding cows.

# **Answer:**



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**18.** The hepatic portal vein drains blood to liver from

A. Heart

- B. Stomach
- C. Kidneys
- D. Intestine



- 19. The water potential of pure water is
  - A. Zero
  - B. Less than zero

- C. More than zero but less than one
- D. More than one



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**20.** Which of the following represents order of

Horse?

- A. Equidae
- B. Perissodactyla

- C. Caballus
- D. Ferus



- **21.** Alexander Von Humbolt described for the first time
  - A. Ecological Biodiversity
  - B. Laws of limiting factor

- C. Species area relationship
- D. Population Growth equation



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# **22.** DNA fragments are

- A. Positively charged
- B. Negatively charged
- C. Neutral

D. Either positively or negatively charged depending on their size

# **Answer:**



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23. The Primary dentition in human differ from permanent dentition is not having one of the folloiwn type of teeth or

A baby boy aged two years years is admitted

to play school and passes through a dental observed that boy that had twenty teeth.

Which teeth were absent

- A. Incisors
- **B.** Canines
- C. Pre-molars
- D. Molars

#### **Answer:**



- **24.** Anaphase Promoting Complex (APC) is a protein degradation machinery necessary for proper mitosis of animal cells. If APC is defective in a human cell, which of the following is expected to occur?
  - A. Chromosomes will not condense
  - B. Chromosomes will be fragmented
  - C. Chromosomes will not segregate
  - D. Recombination of chromosome arms will

occur



- **25.** An important characteristic that hemichordates share with Chordates is
  - A. Absence of notochord
  - B. Ventral tubular nerve cord
  - C. Pharynx with gill slits
  - D. Pharynx without gill slits



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**26.** The genotypes of a hysband and wife are  $I^AI^B$  and  $I^Ai$ .

Among the blood types of their children, how many different genotypes and phenotypes are possible?

- A. 3 genotypes, 3 phenotypes
- B. 3 genotypes, 4 phenotypes

- C. 4 genotypes , 3 Phenotypes
- D. 4 genotypes, 4 phenotypes



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27. Transplantation of tissues/organs to save certain patients often fails due to rejection of such tissues/organs by the patient. Which type of immune response is responsible for such rejections

- A. Autoimmune response
- B. Cell-mediated immune response
- C. Humoral immune response
- D. Physiological immune response



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**28.** Adult human RBCs are enucleate. Which of the following statement (s) is/are most appropriate explanation for this feature?

- (1) They do not need to reproduce (2) They are somatic cells (3) They do not metabolise (4) All their internal space is available for oxygen transport. A. only (d)

  - B. Only (a)
  - C. (a), (c) and (d)
  - D. (b) and (c)

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**29.** Lungs are made up of air filled sacs the alveloi they do not collase even after forceful expeiration because of

- A. Residual Volume
- B. Inspiratory Reserve Volume
- C. Tidal Volume
- D. Expiratory Reserve Volume

**Answer:** 

# 30. Zygotic meiosis is characteristic of

- A. Marchantia
- B. Fucus
- C. Funaria
- D. Chlamydomonas

#### **Answer:**



**31.** Select the correct route for the passage of sperms in male frogs:-

A. Testes  $\;
ightarrow\;$  Bidder's canal  $\;
ightarrow\;$  Kideny

ightarrow Vasa efferentia ightarrow Urinogenital

 $\mathsf{duct} \, o \, \mathsf{Cloaca}$ 

B. Testes  $\;
ightarrow\;$  Vasa efferentia  $\;
ightarrow\;$  Kideny

ightarrow Seminal vesicle ightarrow Urinogenital

 $\mathsf{duct} \, o \, \mathsf{Cloaca}$ 

C. Testes  $\;
ightarrow\;$  Vasa efferentia  $\;
ightarrow\;$  Bidder's

canal 
$$ightarrow$$
 Ureter  $ightarrow$  Cloaca

D. Testes  $\;
ightarrow$  Vasa efferentia  $\;
ightarrow$  Kideny

$$ightarrow$$
 Bidder's canal  $ightarrow$  Urinogenital

 $\mathsf{duct} \, o \, \mathsf{Cloaca}$ 

## Answer:



**32.** Which one of the following statement is not valid for aerosols ?

A. They are harmful to human health

B. They alter rainfall and monsoon patterns

C. They cause increased agricultural productivity

D. They have negative impact on agricultural land

**Answer:** 

- 33. Viroids differ from viruses in having
  - A. DNA molecules with protein coat
  - B. DNA molecules without protein coat
  - C. RNA molecules with protein coat
  - D. RNA molecules without protein coat



**34.** During DNA replication, Okazaki fragments are used to elongate:

A. The leading strand towards replication fork

B. The lagging strand towards replication fork

C. The leading strand away form replication

fork

D. The lagging strand away form the replication fork

#### **Answer:**



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**35.** Plants which produce characteristic pneumatophores and show vivipary belong to

A. Mesophytes

B. halophytes

- C. Psammophytes
- D. Hydrophytes



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**36.** The process of separation and purification of expressed protein before marketing is called

A. Upstream processing

- B. Downstream processing
- C. Bioprocessing
- D. Postproduction processing



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**37.** Identify the wrong statement in context of heartwood

A. Organic compounds are deposited in it

- B. It is highly durable
- C. It conducts water and minerals efficiently
- D. It comprises dead elements with highly lignified walls



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38. Spliceosomes are not found in cells of

- A. Plants
- B. Fungi
- C. Animals
- D. Bacteria



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**39.** Which of the following statements is correct?

A. 1) The ascending limb of loop of Henle is impermeable to water

B. 2)The descending limb of loop of Henle is impermeable to water

C. 3)The ascending limb of loop of Henle is permeable to water

D. 4)The descending limb of loop of Henle is permeable to electrolytes

## **Answer:**



**40.** Which ecosystem has the maximum biomass?

- A. a) Forest ecosystem
- B. b) Grassland ecosystem
- C. c) Pond ecosystem
- D. d) Lake ecosystem

#### **Answer:**



**41.** The final proof for DNA as the genetic material came from the experiments of

- A. Griffith
- B. Hershey and Chase
- C. Ayery, Mcleod and McCarty
- D. Hargobind Khorana

#### **Answer:**



42. The function of copper ions in copper releasing IUD's is

A. They suppress sperm motility and fertilizing capacity of sperms

C. They make uterus unsuitable for

B. They inhibit gametogenesis

D. They inhibit ovulation

implantation

## **Answer:**



## 43. An example of colonial algae is

A. Chlorella

B. Volvox

C. Ulothrix

D. Spirogyra

#### **Answer:**



- A. Maturation
- B. Elongation
- C. Root cap
- D. Meristematic activity



- **45.** Hypersecretion of Growth Hormone in adults does not cause further increase in height, because
  - A. Growth Hormone becomes inactive in adults.
  - B. Epiphyseal plates close after adolescence.
  - C. Bones loose their sensitivity of Growth

    Hormone in adults.

D. Muscle fibres do not grow in size after birth.

## **Answer:**



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**46.** Which of the following in sewage treatment removes suspended solids?

A. Tertiary treatment

B. Secondary treatment

- C. Primary treatment
- D. Sludge treatment



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## 47. Select the mismatch

- A. Pinus Dioecious
- B. Cycas Dioecious
- C. Salvinia Heterosporous

D. Equisetum - Homosporous

#### **Answer:**



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**48.** What is the criterion for DNA fragments movement on agarose gel during gel electrophoresis?

A. The larger the fragment size, the farther it moves

- B. The smaller the fragment size, the farther itmoves
- C. Positive charged fragment moves to farther end.
- D. Negatively charged fragments do not move



**49.** In Bougainvillea, thorns are the modifications of

- A. Stipules
- B. Adventitious root
- C. Stem
- D. Leaf

#### **Answer:**



**50.** The association of histone H1 with a nucleosome indicates

- A. Transcriptionis occurring
- B. DNA replication is occurring
- C. The DNA is condensed into a Chromatin

**Fibre** 

D. The DNA double helix is exposed

#### **Answer:**



# **51.** A temporary endocrine gland in the human body is

- A. Pineal gland
- B. Corpus cardiacum
- C. Corpus luteum
- D. Corpus allatum

#### **Answer:**



## 52. Select the mismatch

- A. Frankia Alnus
- B. Rhodospirillum Mycorrhiza
- C. Anabaena nitrogen fixer
- D. Rhizobium Alfalfa

#### **Answer:**



**53.** GnRH, a hypothalamic hormone, needed in reproduction acts on

A. a) anterior pituitary gland and stimulates secretion of LH and oxytocin.

B. b) anterior pituitary gland and stimulates secretion of LH and FSH.

C. c) Posterior pituitary gland and stimulates secretion of oxytocin and

FSH.

D. d) Posterior pituitary gland and

stimulates secretion of LH and relaxin.

#### **Answer:**



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**54.** A gene whose expression helps to identify transformed cell is known as

A. Selectable marker

B. Vector

C. plasmid

D. Structural gene

#### **Answer:**



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**55.** Presence of plants arranged into well-defined vertical layers depending on their height can be seen best in

A. Tropical Savannah

- B. Tropical Rain Forest
- C. Grassland
- D. Temperate Forest



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**56.** Functional megaspore in an angiosperm develops into

A. Ovule

- B. Endosperm
- C. Embryo sac
- D. Embryo



- 57. DNA replication in bacteria occurs
  - A. During S phase
  - B. Within nucleolus

- C. Prior to fission
- D. Just before transcription



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**58.** Which among these is the correct combination of aquatic mammals?

- A. 1)Seals, Dolphins, Sharks
- B. 2)Dolphins, Seals, Trygon

- C. 3) Whales, Dolphins, Seals
- D. 4)Trygon, Whales, Seals



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## **59.** Coconut fruit is a

- A. Drupe
- B. Berry
- C. Nut

D. Capsule

#### **Answer:**



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## 60. Double fertilization is exhibited by

- A. Gymnosperms
- B. Algae
- C. Fungi
- D. Angiosperms



- **61.** Which of the following components provides sticky character to the bacterial cell
  - A. Cell wall
  - B. Nuclear membrane
  - C. plasma membrane
  - D. Glycocalyx



- **62.** Life cycle of Ectocarpus and Fucus respectively are
  - A. Haplontic, Diplontic
  - B. Diplontic, Haplodiplontic
  - C. Haplodiplontic, Diplontic
  - D. Haplodiplontic, Haplontic



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**63.** Which one of the following is related to Exsitu sonservation of threatened animals and plants

- A. Wildlife Safari parks
- B. Biodiversity hot spots
- C. Amazon rainforest
- D. Himalayan region



- **64.** Good vision depends on adequate intake of carotene rich food
- Select the best option from the following statements
- (A) Vitamin A derivatives are formed from carotene
- (B) The photopigments are embedded in the membrane discs of the inner segment

(D) Retinal is a light absorbing part of all the visual photopigments

(C) Retinal is a derivative of Vitamin A

A. (a) and (b)

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

C. (a) and ( c )

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

# **Answer:**



- **65.** Thalassemia and sickle cell anemia are caused due to a problem in globin molecule synthesis. Select thhe correct statement.
  - A. Both are due to a qualitative defect in globin chain synthesis
  - B. Both are due to a qualitative defect in globin chain synthesis.
  - C. Thalassemia is due to less synthesis of globin molecules.

D. Sickle cell anemia is due to a quantitative problem of globin molecules

# **Answer:**



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**66.** Which of the following are not polymeric

A. 1)nucleic acids

B. 2)protein

- C. 3)polysaccharides
- D. 4)Lipids



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**67.** A disease caused by an autosomal primary non-disjunction is

- A. Down's Syndrome
- B. Klinefelter's Syndrome

- C. Turner's Syndrome
- D. Sickle Cell Anemia



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**68.** With reference to factors affecting the rate of photosynthesis, which of the following statements is not correct?

- A. a) Light saturation for  $CO_2$  fixation occurs at 10% of full sunlight .
- B. b) Increasing atmospheric  $CO_2$  concentration up to 0.05% can enhance  $CO_2$  fixation rate
- C. c)  $C_3$  plants respond to higher temperatures with enhanced photosynthesis while  $C_4$  plants have much lower temperature optimum.

D. d) Tomato is a greenhouse crop which can be grown in  $CO_2$  enriched atmosphere for higher yield.

# **Answer:**



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**69.** Fruit drop is prevented by spraying

A. Cytokinins

B. Ethylene

C. Auxins

D. Gibberellic acid

### **Answer:**



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**70.** The region of Biosphere Reserve which is legally protected and where no human activity is allowed is known as

A. Core zone

- B. Buffer zone
- C. Transition zone
- D. Restoration zone



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**71.** In Case of poriferans, the spongocoel is lined with flagellated cells called

A. ostia

- B. oscula
- C. choanocytes
- D. mesenchymal cells



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**72.** A decrease in blood pressure / volume will not cause the release of

A. Renin

- B. Atrial natriuretic Factor
- C. Aldosterone
- D. ADH



- 73. A dioecious flowering plant prevents both
  - A. Autogamy and xenogamy
  - B. Autogamy and geitonogamy

- C. Geitonogamy and xenogamy
- D. Cleistogamy and xenogamy



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**74.** Which of the following facilitates opening of stomatal aperture ?

- A. Contraction of outer wall of guard cells
- B. Decrease in turgidity of guard cells

C. Radial orientation of cellulose

- microfibrils in the cell wall of guard cells
- D. Longitudinal orientation of cellulose microfibrils in the cell wall of guard cells

# **Answer:**



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**75.** The DNA fragments separated on an agarose gel can be visualised after staining with

- A. Bromophenol blue
- B. Acetocarmine
- C. Aniline blue
- D. Ethidium bromide



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76. Which statement is wrong for Krebs' cycle?

A. there are three points in the cycle where

 $NAD^{\,+}$  is reduced to NADH  $+H^{\,+}$ 

B. There is one point in the cycle where

 $\mathit{FAD}^+$  is reduced to  $\mathit{FADH}_2$ 

C. During conversion of succinyl CoA to succinic acid, a molecule of GTP is synthesised

D. The cycle starts with condensation of acetyl group (acetyl CoA) with pyruvic acid yield citric acid



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# 77. Mycorrhizae are the example of

- A. Fungistasis
- B. Amensalism
- C. Antibiosis
- D. Mutualism

#### **Answer:**

**78.** The pivot joint between atlas and axis is a type of

A. fibrous joint

B. Cartilaginous joint

C. Synovial joint

D. saddle joint

**Answer:** 



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**79.** Which of the following is correctly matched for the product produced by them

A. Acetobacteraceti: Antibiotics

B. Methanobacterium: Lactic acid

C. Penicillium notatum: Acetic acid

D. Sacchromyces cerevsiae: Ethanol

**Answer:** 



**80.** Frog's heart when taken out of the body continues to beat for sometime.

Select the best option from the following statements.

- (i) Frog is a poikilotherm.
- (ii) Frog does not have any coronary circulation
- (iii) Heart is 'myogenic' in nature.
- (iv) heart is autoexcitable

A. Only (c)

- B. Only(d)
- C. (a) and (b)
- D. (c) and (d)



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**81.** Myelin sheath is produced by

or

Myelin of the nerve fibres of the central

nervous system is produced and maintained by

- A. Schwann cell and Oligodendrocytes
- B. Astrocytes and Schwann cells
- C. Oligodendrocytes and Osteoclasts
- D. Osteoclasts and Astrocytes

# **Answer:**



# 82. Capacitation occurs in

- A. Rete testis
- B. Epididymis
- C. Vas deferens
- D. Female Reproductive tract

### **Answer:**



**83.** The morphological nature of the edible part of coconut is

- A. Perisperm
- B. Cotyledon
- C. Endosperm
- D. Pericarp

### **Answer:**



<b>84.</b> Which of the following is made up of dead
cells?

- A. Xylem parenchyma
- B. Collenchyma
- C. Phellem
- D. Phloem



**85.** In case of a couple where the male is having a very low sperm count, which technique will be suitable for fertilisation

- A. Intrauterine transfer
- B. Gamete intracytoplasmic fallopian transfer
- C. Artificial Insemination
- D. Intracytoplasmic sperm injection

## **Answer:**



**86.** Which of the following RNAs should be most abundant in animal cell ?

A. 1)r-RNA

B. 2)t-RNA

C. 3)m-RNA

D. 4)mi-RNA

**Answer:** 



**87.** The vascular cambium normally gives rise to

- A. Phelloderm
- B. Primary phloem
- C. Secondary xylem
- D. Periderm

### **Answer:**



**88.** Which of the following options gives the correct sequence of events during mitosis?

A. Condensation ightarrow nuclear membrane disassembly ightarrow crossing over ightarrow segregation ightarrow telophase

B. Condensation ightarrow nuclear membrane disassembly ightarrow arrangement at equator ightarrow centromere division ightarrow

 $\mathsf{segregation} \ \to \ \mathsf{telophase}$ 

C. Condensation ightarrow crossing over ightarrow

nuclear membrane disassembly ightarrow

 $\mathsf{segregation} \ \to \ \mathsf{telophase}$ 

D. Condensation ightarrow arrangement at

equator ightarrow centromere division ightarrow

 $\mathsf{segregation} \ \to \ \mathsf{telophase}$ 

# **Answer:**



**89.** Which of the following options best represents the enzymes composition of pancreatic juice?

A. amylase, peptidase, trypsinogen, rennin

B. amylase, pepsin, trypsinogen, maltase

C. peptidase, amylase, pepsin, rennin

D. lipase, amylase, trypsinogen,

procarboxy peptidase

## **Answer:**

# 90. Attractants and rewards are required for

- A. Anemophily
- B. Entomoph
- C. Hydrophily
- D. Cleistogamy

### **Answer:**



