# BIOLOGY

# NEET & AIIMS

# MOCK TEST 12

**Example**

**1.** Xylary element absent in most of the gymnosperms

A. xylem parenchyma

B. tracheids

C. vessels

D. both(2)and(3)

**Answer: C**

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**2.** The dead component of pholem

A. sieve tube elements

B. Companion cells

C. pholem parenchyma

D. pholen fibres

**Answer: D**

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**3.** In roots, the arrangement of xylem and vascular bundies is _ and_ respectively

A. Endarch, radial

B. Endarch, conjoint

C. Exarch, radial

D. Exarch, conjoint

**Answer: C**

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**4.** How many of the given cells do not possess nuclues? Companion cells Albuminous cells, Mature seve tube, Xylary fibres. Scléreids. Phloem parenchyma

A. One

B. three

C. four

D. two

**Answer: B**

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**5.** Companion cells

A. Are specialised sclerenchymatous cells

B. Are specialised parenchymatous cells

C. Are associated with phloem fibres

D. Are without cell wall

**Answer: B**

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**6.** Which of the following components of phloem is mostly absent in primary phloem?

A. Companion cells

B. Phloem fibres

C. Sieve tube elements

D. Phloem parenchyma

**Answer: B**

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**7.** A waxy thick layer generally covers the epidermis which prevent water loss it is absent in

A. Stem

B. Root

C. Leaves

D. Flower

**Answer: B**

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**8.** Ground tissue does not include

A. Epidermis

B. Cortex

C. Endodermis

D. Pericycle

**Answer: A**

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**9.** In leaves, xylem and phloem are present

A. On different radii and arrangement is called radial

B. On different radii and arrangement is called conjoint

C. At the same radius and arrangement is called radial

D. At the same radius and arrangement is called conjoint

**Answer: D**

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**10.** Dicot stems show scondary growth due to

A. Presence of cambium between xylem and phloem

B. Presence of parenchyma between xylem and phloem

C. Absence of cambium between xylem and phloem

D. Absence of parenchyma between xylem and phloem

**Answer: A**

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**11.** All of the following statements are currect for guard cell except

A. Bean shaped in dicots

B. Are green

C. Dumb-bell shaped in grasses

D. Outer we is are thick and the inner walls are thin

**Answer: D**

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**12.** Ground tissue system of leaf is called

A. Conjucive lissue

B. Mesophyll

C. Medullary rays

D. Spongy tissue

**Answer: B**

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**13.** Casparian strips are seen in

A. Dicot root

B. Monocot stem

C. Monocot root

D. All except (2)

**Answer: D**

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**14.** Parenchymatous cells found between xylem and phloem in root represents

A. Conjunctive tissues

B. Medullary rays

C. Pith rays

D. Stele

**Answer: A**

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**15.** Read the following option -(a) Monocotyledonous roots have fewer xylem bundles,(b) Monocotyledonous roots do not show secondary growth, (c) Dicot root has small pith.

A. (a) & (c)

B. (b) & (d)

C. (b) & (c)

D. (C) & (d)

**Answer: C**

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**16.** Hypodermis is collenchymatous in

A. Monocot root

B. Sunflower stem

C. Monocot stem

D. dicot root

**Answer: B**

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**17.** Innermost layer of the cortex is called

A. Hypodermis

B. Pericycle

C. Endodermis

D. Cambium

**Answer: C**

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**18.** Starch sheath is found in

A. Sunflower stem

B. Maize stem

C. Mango root

D. Rice root

**Answer: A**

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**19.** The waxy layer covers the leaf epidermis on

A. Adaxial surface only

B. Abaxial surface only

C. Both surfaces

D. Lower surface only

**Answer: C**

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**20.** Choose the incorrect statement w.r.t. leaves

A. Nearly same size of vascular bundles are seen in monocot leaf

B. The stomata are present on both surfaces in isobilateral leaf

C. Mesophyll is not differentiated in dicot leaf

D. Mesophyll is photosynthetic in leaves

**Answer: C**

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**21.** The bulliform cells are

A. Small

B. Empty

C. pigmented

D. Cortical cells

**Answer: B**

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**22.** All of the following tissues are involved in secondary growth except

A. Vascular cambium

B. Lateral meristem

C. Cork cambium

D. Apical meristem

**Answer: D**

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**23.** Which of the following change is likely to occur in urine composition during diabetes mellitus?

A. Decrease in osmolanty of urine

B. Decrease in amount of urea in urine

C. Presence of glucose in urine

D. Presence of blood in urine

**Answer: C**

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**24.** Which of the following structures plays an important role in the elimination of diolesterol and degraded steroid hormones?

A. Lungs

B. Liver

C. Sweat gland

D. Sebaceous gland

**Answer: B**

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**25.** Read the following steps of haemodialysis : (a) Blood is taken out of the patient and is cooled to to $0^{o}C$ , br (b) Blood is mixed with anti- heparin. br (c) Blood is then pumped to artificial kidney. br (d)Blood is filtered ,br (e) Blood is warm to study temperature and mixed with hera , br(f) ,which of the mentained steps incorrect reading here amd analysis ?

A. (a) & ( e )

B. (C) & (d)

C. (b) & ( e )

D. (e) & (f)

**Answer: C**

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**26.** In which of the following disorders, there is an increase concentration of urea in blood ?

A. Uremia

B. Haematuria

C. Pyuria

D. Polyures

**Answer: A**

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**27.** The composition of blood plasma and dialysing fluid is same w.r.t. all components except

A. Glucose

B. Nitrogenous wastes

C. Amino acids

D. $Na^+$ ions

**Answer: B**

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**28.** Which type of movement is performed by spermatozoa of humans?

A. Ciliary movement

B. Amoeboid movement

C. Muscular movement

D. Flagellar movement

**Answer: D**

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**29.** Individual muscle bundle is known as A_ and many bundles are held together by a collagenous sheath of connective tissue

called_ B Choose the option which gives the correct answer for blanks in above statement.

A. (A) Fascia -( B) Fasciculi

B. (A) Fascia -(B) Endomysium

C. (A) Fascicle -(B)Endomysium

D. (A) Fascicle -(B) Fascia

**Answer: D**

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**30.** Intercalated disc is characteristic feature of which type of muscle fibres?

A. Skeletal muscles

B. Smooth muscles

C. Both (1) & (2)

D. Cardiac muscles

**Answer: D**

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**31.** Among the following proteins : Tropomyosin, Troponin, F-actin, Meromyosin How many are present in I-band and H-zone respectively?

A. 3, 1

B. 3,2

C. 4,1

D. 1,3

**Answer: A**

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**32.** Which of the following parts of contractile proteins has ATPase activity?

A. G-actin

B. LMM

C. HMM

D. Tropomyosin

**Answer: C**

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**33.** Which of the following events leads to the breakdown cross-bridges during muscle contraction?

A. ATP hydrolysis

B. Binding of ATP to troponin

C. Binding of myosin head with new ATP

D. Binding of ATP to actin

**Answer: C**

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**34.** Which of the following statements is incorrect regarding Sliding Filament Theory?

A. Contraction of muscle is initiated by a signal from motor neuron

B. in Ca2+ ion uptake by muscle fibre from ECF, leading to increase in intracellular Ca2+ level

C. Ca2+ causes change in shape of troponin tropomyosin complex, thus

exposing myosin binding sites on actin filaments

D. Length of A-band remains unchanged during muscle contraction

**Answer: B**

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**35.** In which of the following structures, $Ca2^{+}$ is sequesterad when muscles are relaxed?

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**36.** Which of the following statements is true regarding all or nona principle?

A. All stimuli irrespective of their strength can cause contraction of muscles

B. By increasing the strength of stimulus strength of muscle fibre's contraction increase

C. All stimuli which are above the thresh

D. Both (2) & (3)

**Answer: C**

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**37.** A single isolation of muscle fibre is known as

A. Twitch

B. Tetany

C. Cramp

D. Muscle tone

**Answer: A**

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**38.** a_ donates high energy and phosohate to ADP, production of ATP b_ is again formed B_ is again formed in relaxing muscel is using c_ and b_ . Choose the option which correctly fills up the blanks a, b,c, d

A. a = Creatin ,b=Phosphocreatine , c=ADP ,

d= creatine

B. a=Phosphocreatine ,b=Phosphocreatine ,

c= ATP ,d=creatine

C. a = Creatin ,b= Creatin ,c=ADP, d= Creatin

D. a=Phosphocreatine, b =Creatine, c=ATP d=

Phonephocreatine

**Answer: B**

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**39.** Select the correct statement regarding Cori's cycle

A. Entire lactic acid is converted into glucose in muscles

B. About 1/5th of lactic acid is oxidised to $CO_2$ and water

C. Oxidative breakdown of glucose in muscles produces lactic acid

D. Both (1) & (3)

**Answer: B**

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**40.** Rigor mortis is caused due to

A. Breakdown of cross-bridges between actins and myosins

B. Lack of ATP and phosphocreatine

C. Sustained cross bridges between actins and myosins

D. Both (2) & (3)

**Answer: D**

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**41.** Red muscle fibres can be distinguished from white muscle fibres as the former have

A. Less amount of mitochondria

B. Fast rate of contraction for short period

C. Less sarcoplasmic reticulum

D. Anaerobic respiration as main mode of ATP generation

**Answer: C**

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**42.** Which of the following statements is incorrect?

A. Calmodulin and calsequestrin are calcium binding proteins found in

smooth muscles and skeletal muscles respectively

B. Length of a muscle fibre shortens during isometric contraction while it remains same during isotonic contraction

C. Summation occurs when a second stimulus is given before complete relaxation of muscle in response to the first stimulus

D. Muscle fatigue and cramps are caused due to accumulation of lactic acid in them

**Answer: B**

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**43.** Which of the following disorders is characterised by rapid spasm in muscles due to lack of Ca in body fluids?

A. Tetany

B. Muscle atrophy

C. Muscular dystrophy

D. Myasthenia gravis

**Answer: A**

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**44.** Find the correct option regarding the number of bones present in given part of axial skeleton

A. Skull- 30, vetebral column-25 , ribs+ sternum -24+1

B. Skull- 29, vetebral column-26 , ribs+ sternum -12+1

C. Skull- 29, vetebral column-26 , ribs+ sternum -24+1

D. Skull- 30, vetebral column-25 , ribs+ sternum -25+1

**Answer: C**

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**45.** Which of the following skull bones articulates with he alias vecora?

A. Parietal

B. Temporal

C. Ethmoid

D. Occipital

**Answer: D**

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**46.** Match the column I with column II and choose the correct option :a. Mandible -(1) Prominence of cheek , b. Zygomatic -(ii) Has sella turcica which lodges the pituitary gland , d. Sphenoid -(v) Amplification of soundc. Incus -(ii) Strongest facial bone

A. a(iii), b(1), c(iv), d(ii)

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

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

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

**Answer: A**

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**47.** Which of the following is a correct match between a vertebra and its characteristic feature which helps in its identification?

A. Atlas - Has odontoid peg

B. Thoracic vertebrae - 12 pairs

C. Lumbar vertebrae - Centra have articulation facets for ribs

D. Vertebra prominens (7th cervical vertebra) - Undivided spinous process with tubercle at the tip

**Answer: C**

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**48.** Read the following statements regarding Rib cage and its components,

a-Formed by ribs, sternum and thoracic vertebrae,

b- Ribs articulate with sternum on dorsal side and thoracic vertebrae on ventral side.

c- Vertebral ribs articulate with thoracic vertebrae only.

d- First 8 pairs of ribs directly articulate with sternum. Choose the option which includes only incorrect statements

A. (a) & (b)

B. (a) only

C. (b) & (d)

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

**Answer: C**

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**49.** All ribs are bicephalic which means

A. They articulate with both sternum and vertebral column

B. They articulate with sternum only with two aticulation points

C. They have two articulation points on dorsal side

D. They have one articulation point on dorsal side and one on ventral side

**Answer: C**

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