



BIOLOGY

NEET & AIIMS

Test-12

Exercise

1. Tricarpellary, syncarpous gynoecium with superior ovary and axile placentation is found in

A. Asparagus and Tulip

B. Chilli and Tomato

C. Trifolium and Sesbania

D. Lupin and Brinjal

Answer:



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2. Select the odd one w.r.t collenchyma.

- A. Provide mechanical support to growing plant parts
- B. Made up of highly thickened dead cells
- C. Thickening of cellulose, hemicellulose and pectin at corners of wall
- D. Can assimilate food when contain chloroplasts

Answer:



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3. Select the mismatched pair:

A. Kinetochores - Disk shaped structure on both sides of centromere

B. Elaioplasts -Store oils and fats

C. Mitochondria - Divide by multiple fission

D. Primary wall - Capable of growth

Answer:



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4. Which of the following processes takes place during pachytene stage of meiosis?

A. Synaptonemal complex dissolves

B. Bivalent clearly appears as tetrad

C. Homologous chromosomes of the bivalents separate

D. Terminalisation of chiasmata

Answer:



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5. Select the incorrect statement

A. More the solute molecules in solution,
lower the solute potential

B. Imbibition is a special type of diffusion
in which water is absorbed by solids-
colloids

C. In symplastic system movement of water
occurs exclusively through the
intercellular spaces and walls of the cells

D. Amides contain more nitrogen than amino acids, they are transported to other parts of the plant via xylem

Answer:



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6. Which of the following plants give higher yields. when they are allowed to grow in carbon dioxide enriched atmosphere?

A. Maize and Sorghum

B. Sugarcane and rice

C. Tomatoes and Bell pepper

D. Sugarcane and Bell pepper

Answer:



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7. Enzyme systems to partially oxidise glucose for energy needs is present in

- A. Only prokaryotes
- B. Some eukaryotes and protists
- C. Cytoplasm of living organisms
- D. Viruses and eubacteria

Answer:



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8. The intracellular intrinsic factor which controls growth and differentiation in plants is

A. Plant growth regulators

B. Chemicals

C. Genetic

D. Water and oxygen

Answer:



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9. Select the correct match:

A. Agamospermy - Amphimixis

B. Residual nucellus in seed - Perisperm

C. Longest seed dormancy - Phoenix

dactylifera

D. Xenogamy - Genetically self-pollination

Answer:



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10. Select the incorrect statement about polygenic inheritance.

- A. Dominant alleles have cumulative effect
- B. Skin colour in man is an example
- C. Shows a bell-shaped normal distribution curve
- D. Extreme phenotypes are more frequent but the intermediate ones are rare

Answer:



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11. Consanguineous mating should be discouraged because

A. It will increase frequency of mutation in population

B. It is ethically wrong

C. It increases expression of harmful recessive genetic defects

D. It increases hybrid vigour

Answer:





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12. Select the mismatched pair

A. Homeotic genes - Control development

B. HGP - Closely associated with
bioinformatics

C. SNPs - Single nucleotide polymorphism

D. VNTRs - Microsatellite

Answer:



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13. Consider the following statements w.r.t. a translational unit in mRNAa.

a. UTRs are present after start codon and before stop codons.

b. It is the sequence of RNA that is flanked by start codon (AUG) and stop codon.

c. It codes for a polypeptide.

d. UTRs are needed for efficient translation process.

A. a, b &c are incorrect

B. Only a is incorrect

C. Only c&d are correct

D. All are incorrect

Answer:



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14. In mung bean , resistance to yellow mosaic virus and powdery mildew were induced by

A. Genetic engineering

B. Somatic hybridization

C. Mutation breeding

D. Conventional breeding

Answer:



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15. Select the mismatched pair

A. Floccs - Aerobic microbes

B. Trichoderma - Statins

C. LAB - Checks disease causing microbes

D. Azospirillum - Enrich soil nitrogen content

Answer:



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16. Consider the following statements. a. NPP is the available biomass for the consumption to herbivores and decomposers. b. Plants capture only 2 - 10 percent of PAR. c. Energy at

lower trophic level is always less than at a higher level. d. Earth is an open ecosystem w.r.t. energy. The correct statements are

A. Only a & b

B. a, b & d

C. a, c & d

D. b, c & d

Answer:



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17. Diversity shown by a single species at the genetic level over its distribution range is known as

- A. Genetic diversity
- B. Species diversity
- C. Ecological diversity
- D. Community diversity

Answer:



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18. Odd climatic changes that result in rise in temperature of ocean waters leading to deleterious changes in the environment like increased melting of polar and Himalayan ice caps severely affecting Indian monsoon is

- A. Green-house effect
- B. El Nino effect
- C. CO₂, fertilization effect
- D. Ocean pollution

Answer:



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19. Similarities between annelids and arthropods, include all, except

A. Protostome development

B. Metamerism

C. Schizocoelom

D. Dorsal nerve cord

Answer:



20. A stable population exists in Hardy Weinberg equilibrium with two alleles T and t. TT and Tt individuals have the ability to curl their tongues while tt individuals can't. The allele frequency of T is 0.8. What is percentage of heterozygotes?

A. 0.4

B. 0.32

C. 0.64

D. 0.5

Answer:



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21. Haemoglobin in capillaries of the lungs is exposed to an oxygen pressure of 100. This haemoglobin is transported within erythrocytes to capillaries in muscles, where the oxygen pressure is 20. Which of the following will occur in a tired muscle?

- A. Haemoglobin will bind oxygen from the muscle
- B. Haemoglobin will enter muscle cells
- C. Haemoglobin will release most of the oxygen it is carrying
- D. Haemoglobin will release less than half of the oxygen it is carrying

Answer:



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22. A person takes a large overdose of antacid. As a result, the activity of which of the following enzymes would be most affected?

A. Pepsin

B. Maltase

C. Lipase

D. Chymotrypsin

Answer:



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23. Which of the following association of brain structure and function is incorrect?

A. Medulla - Vomiting

B. Hypothalamus - Satiety and thirst

C. Cerebellum - Higher intellectual function

D. Hippocampus - Short term to long term
memory

Answer:



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24. To ensure survival of their species, animals which do not spend a large amount of time caring their offspring must

A. Have the ability to live in water and on land

B. Lay shelled eggs

C. Produce many offsprings

D. Have internal fertilisation

Answer:



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25. Which of the following is in a different chemical category than the others w.r.t. nitrogenous bases?

A. Cytosine

B. Thiamine

C. Guanine

D. Uracil

Answer:



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26. Find the incorrect match.

A. Oxytocin - Initiates signal for parturition

B. Glucagon - Stimulates glycogenolysis in
hepatocytes

C. Progesterone - Prepares the uterus for
implantation of fertilised egg

D. Aldosterone - Indicates water resorption
in kidneys

Answer:



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27. A mechanism that mammals have developed to dissipate excess heat in hot weather is

- A. Burrowing
- B. Huddling
- C. Sitting in shade
- D. Sweating

Answer:



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28. Which of the following represents earliest set of haploid structures to appear during gametogenesis?

- A. Secondary spermatocyte, first polar body
- B. Primary spermatocyte, second polar body
- C. Spermatid, ovum

D. Spermatozoa, ootid

Answer:



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29. Decline in which hormone leads to regression of corpus luteum in non-pregnant healthy female?

A. Hcg

B. Progesterone

C. FSH

D. LH

Answer:



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30. Choose the Incorrect statement regarding Syphilis.

A. Caused by a spirochaete

B. Can also be transmitted from Infected mother to Infant during child birth or across placenta

C. Its spread can be curtailed by use of IUDS

D. Its causative agent cannot be cultured in artificial medium in laboratory

Answer:



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31. British doctors Patrick Steptoe and Robert Edwards have been credited for developing

A. First non-steroidal drug

B. Technique of RNA-interference

C. First IVF baby

D. Technique for intra-cytoplasmic sperm injection

Answer:



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32. Properties exhibited by normal cells include

A. Presence of oncogenes

B. Absence of contact inhibition

C. Limited telomerase activity in differentiated cells

D. Both (1) & (3)

Answer:



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33. Symptoms of allergy can be alleviated by administration of all, except

A. Prednisolone

B. Antihistamine

C. IgE

D. Catecholamines

Answer:



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34. If gene encoding chain 'A' of human insulin was incorporated at Pst I site of plasmid pBR322, the recombinants

- A. Would appear blue in colour
- B. Be sensitive to ampicillin
- C. Would appear white in colour
- D. More than one option is correct

Answer:



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35. Restriction endonuclease Eco RI is classified with E.C. number 3.1.23,13. What does 3 in bold indicate?

A. It is a hydrolytic enzyme

B. It breaks sugar phosphate ester bond by dehydration

C. It acts on palindromic sequence

D. It breaks hydrogen bonds between opposite DNA strands

Answer:



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36. Can you think and answer how a reporter enzymes can be used to monitor tranformation of host cells by foreign DNA in addition to a selectable marker ?

A. Antibiotic resistance gene

B. Restriction enzymes

C. β -galactosidase

D. α -galactosidase

Answer:



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37. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Conservation and protection of whole ecosystem and its biodiversity at all level is in-

situ conservation R: Wildlife Safari Park serves this purpose.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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38. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: In an aquatic ecosystem grazing food chain is the major conduit for energy flow **R:**

Detritus food chain may be connected with the grazing food chain at some levels.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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39. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Evolutionary biologists believe that mammals are most successful. R: They have

ability to maintain a constant body temperature

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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40. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Each operon has its specific operator. **R :** Lac

operator is present in the lac operon and it interacts specifically with structural genes.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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41. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Haploids are better for mutation experimental studies. **R:** All mutations either

dominant or recessive can express immediately in them.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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42. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Basal body of cilia and flagella is formed by

centriole in animal cells R: Centriole shows 9 + 2 arrangement of microtubules.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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43. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Epidermal hairs on the stem are called

trichomes R: They help in absorption of water loss due to transpiration,

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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44. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Information like chromosome number structure and behaviour is used in

cytotaxonomy. R: These become more important when there is no supporting loss evidence.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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45. In the following questions , a statement of assertion (A) is followed by a statement of reason (R). Br A: Higher the category, lesser is

the difficulty of determining the organism R:
Problem of classification becomes less
complex.

A. If both Assertion & Reason are true and
the reason is the correct explanation of
the assertion, then mark (1).

B. If both Assertion & Reason are true but
the reason is not the correct explanation
of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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46. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Lichens are mutually useful associations between algae and fungi. R : Lichens do not grow in polluted areas.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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47. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: ADH response is observed during increased osmolarity due to dehydration. R : Vasopressin promotes water uptake from collecting ducts and DCT.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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48. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: In Periplaneta, removal of prothoracic glands results in formation of large nymph. R: Prothoracic gland secretes molting hormone ecdysone.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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49. In the following questions , a statement of assertion (A) is followed by a statement of reason (R). A: Surfaces such as tongue are

lined by compound epithelium R: Many layers in epithelium are present on surfaces prone to abrasion.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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50. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Africa is considered cradle of human evolution R: Mitochondrial DNA obtained from African has least proportion variation or mutation.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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51. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Athletes are advised not to smoke. R: Nicotine stimulates adrenal glands to release adrenaline into blood circulation, which raises heart rate and blood pressure

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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52. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: A single out cross helps to overcome below average growth rate in beef cattle. R: Inbreeding depression resulting in reduced fertility and productivity is overcome by outcrossing.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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53. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A:Thermostable enzyme Taq polymerase is used during annealing step of PCR.R: This heat tolerant enzyme helps primers to hydrogen bond to complementary DNA

- A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

- B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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54. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: The earliest photoautotrophs resembled the green sulfur and purple sulfur bacteria. R: They used HS as source of hydrogen and could carry out only cyclic photophosphorylation.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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55. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Flatworms are dorso-ventrally flattened organisms. R: They are acoelomate and parenchyma cells originating from mesoderm fill up the cavities of the body.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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56. In the following questions , a statement of assertion (A) is followed by a statement of reason (R).

A: Arthropods are the most successful of all animal groups. R: Evolution of jointed appendages and chitinous exoskeleton allowed arthropods to successfully invade every habitat on earth.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4).

Answer:



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