Ministry of Higher Education
& Scientific Research
Al-Muthanna University
College of Science
Dept. of biology

Subject: Adv.plant physiology
Stage: Higher studied
Date: / /2019
Time: 3 hours

21. 10. 2019

((Assessment of the final exam for the 1st semester))
Academic year 2018-2019

45

Note: Support your answer by draw.

Q1/ V-ATPase differs both structurally and functionally from the plasmomembrane H^+ -ATPase. (10.Marks)

Q2/ Dark reactions occur in place of the plastida, what are they phases. Describe that ? (10 marks)

Q3/ Is there a relationship between the effectiveness of the Rubisco enzyme and light, positive or negative? (10.Marks)

Q4/ In C4 plants that do not occur Photorespiration ? (10.Marks)

Q5/ Water Evaporation in the Leaf Generates a Negative Pressure in the Xylem, Describe that? (10.Marks)

Q6/ The Cell Walls of Guard Cells Have Specialized Features. (10.Marks)

Q7/ OVERVIEW of water movement: The Soil–Plant–atmosphere Continuum. (10.Marks)

Good luck

Lecturer
Assist.prof.Dr. Faiq alradi

Head of Department
Assist.prof. Dr. Laith Abdalhassan

Ministry of Higher Education
& Scientific Research
Al-Muthanna University
College of Science
Dept. of Biology

Subject: Advanced Cell Biology
Stage: Postgraduate studies(M.Sc.
Date: 21 Oct 2019
Time: 3 hours

21. 10. 2019

((Assessment of the final exam for the 1st semester))
Academic year 2018-2019

45

Q1: Answer All Branches (14 marks)

A- Describe regulation of receptor mediated endocytosis

B- Draw a figure that shows regulation of insulin of glucose transport by GLUT4 into a myocyte

Q2: Answer All Branches (14 marks)

A- Describe regulation of gene expression by insulin. Draw a figure that shows microdc ns (rafts) in the plasma membrane

B- What are differences between integral and peripheral protein?

Q3: Answer All Branches: (14 marks)

A- Draw the similarities between the signaling pathways that trigger immune responses in plants and animals

B- How eukaryotic proteins can target to the endoplasmic reticulum? with drawing

Q4: Answer All Branches: (14 marks)

A-Transition from G1 phase of the cell cycle to S phase is crucial for the control of eukaryotic cell proliferation, and its misregulation promotes oncogenesis. What about the G1/S Control Point?

B- Draw the transduction of the epinephrine signal: the β-adrenergic pathway.

Q5: Answer one Branch (14 marks)

A- Molecular mechanisms of biosignal transduction: Describe universal six general types of signal transducers.

B- Specific fusion of two biological membranes is central to variety of cellular processes. What are requirements for this fusion?

Best of luck

Lecturer
Asst. Prof. Dr.Nihad A.M. Al-Rashedi

Head of Department
Asst. Prof. Dr. Ali Abd AlHamza

Ministry of Higher Education
& Scientific Research
Al Muthanna University
College of Science
Department of Biology

Subject: Adv. Molecular biology
Stage: MS.c
Date: / /2019
Time: 3 hours

15. 10. 2019

((Assessment of the final exam for the first semester))
Academic year 2018-2019

45

Q1: Use a rough diagram to compare the structures of a protein a-helix and an antiparallel b-sheet. For simplicity, show only the backbone atoms of the protein. (10 M)

Q2: Explain how a single base change in a gene could lead to premature termination of translation of the mRNA from that gene. (10 M)

Q3: What does a rho-dependent terminator look like? What role is rho thought to play in such a terminator? (10 M)

Q4: a- How do we know that the cap contains 7-methylguanosine? (10 M)

b- How do we know that mRNAs are read in the 5□→3 direction?

Q5: You are studying a eukaryotic gene in which translation normally begins with the second AUG in the mRNA. The sequence surrounding the two AUG codons is: CGGAUGCACAGGACAUCCUAUGGAGAUGA where the two AUG codons are underlined. Predict the effects of the following mutations on translation of this mRNA. a. Changing the first and second C's to G's. b. Changing the first and second C's to G's, and also changing the UAU codon before the second AUG codon to UAG. c. Changing the GAGAUGA sequence at the end to CAGAUGU. (15 M)

Q6: What parts of the tRNAs interact with the 30S subunit? With the 50S subunit? (15 M)

The lecture

Head of department

Ministry of Higher Education
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Subject:Histology
Stage:Msc
Date: / /2019
Time: 3 hours

15. 10. 2019

((Assessment of the final exam for the 2st semester))
Academic year 2018-2019

45

Q1-A/ What are the important histological classification of the connective tissue with example for each type? (10 Marks).

B/How can you differentiated between the deferent types of supportive tissues? (10 Marks).

Q2- / The glands have many classification models, how can you classified the glands according to cell numbers that composed the gland with example for each type? (10 Marks).

Q3- /What are the histological structures of the following: (10 Marks).

1-Teeth . 2- Tongue . 3- Heart. 4- Kidney. 5- Liver.

Q4-A/ The muscular tissue have voluntary and un voluntary movement, explain the important histological causes for that? (5 Marks).

B- Define the spermatogenesis and oogenesis and explain the main steps of the spermatogenesis? (10 Marks).

Q5- Answer two branches only:

A/ How can you differentiation between the different types of arterial system? (10 Marks).

B- Explain the main steps of endochondral ossification ? (5 Marks).

Lecturer
Assist prof. Dr. Bassim A. Jassim

Head of Department
Assist . Prof . Dr. Ali.A.Hamza