# جامعة بغداد / كلية العلوم / قسم علوم الحياة

# الامتحان التنافسي للطلبة المتقدمين للدراسات العليا للعام الدراسي 2015-2016 / - المحاولة الثانية

### دكتوراه / احياء مجهرية

الرقم السري:

الاسم الرباعي:

القناة:

الشهادة المتقدم اليها:

التخصص:

ت		MCQ		
	المادة	الدرجة رقمأ	الدرجة كتابة	رقم الصفحة
]	فسيولوجيا الاحياء المجهرية			1
1	الانزيمات			2
	بكتريا مرضية			4-3
	مناعة			9-8-7
8	تقنيات احيائية مجهرية			14
	بايولوجي جزيئي			15
	المجموع من 60% =	8		

	S.A			
رقم الصفحة	الدرجة كتابة	الدرجة رقمأ	المادة	ت
1	Control Street S		فسيولوجيا الاحياء المجهرية	1
2			الانزيمات	2
6-5			بكتريا مرضية	3
13-12-11-10			مناعة	4
14			تقنيات احيائية مجهرية	5
15			بايولوجي جزيئي	6
			المجموع من 40% =	

الدرجة النهائية 100% =

### اسم المادة: علم فسيولوجيا الاحياء المجهرية

الرقم السرى:

### Choose the correct answer (MCQ)

#### Q1/ Which of the following processes does not generate ATP?

- **a.** Photophosphorylation. **b.** the Calvin Benson cycle. **c.** oxidative phosphorylation.
- **d.** substrate level phosphorylation. **e.** none of the above.

#### O2/ Chemotaxis is:

a. Motile of procaryotes can respond to the gradient of attractant and repellents.

b.procaryotes speed up movement toward attractant. c. none of above. d. all the above.

#### Q3/ Facultative anaerobes are bacteria that can

- a- Grow in the presence of molecular oxygen only b-Grow in the presence of Carbone dioxide only
- c- Switch between aerobic and anaerobic respiration d-Grow in PH12

#### Q4/ Carotenoids in photosynthetic microorganisms used in

a- Nitrogen fixation b-Glucose hydrolysis c-Capture light energy d-Hydrogen peroxide production

مجموع درجات الاسئلة :-

### Answer the following questions briefly

Q1/ Archaea are insensitive to penicillin's?

Q2/ Explain briefly the sporulation?

### اسم المادة: الانزيمات

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•	سري	الرحم ا

### Choose the correct answer (MCQ)

#### Q1/Rennin is:

a- A glycolytic enzyme. b- Proteolytic enzyme c- Degrades casein.

#### Q2/ ATP may:

a- Accelerate some enzyme reactions b-Deactivate some enzymes c-Has no effect on enzyme reaction.

#### Q3/ kinases are:

- a- Peptidase enzymes b- Dephosphorylation enzymes c-Phosphorylation enzymes.
- Q4/ Zero order reaction:
  - a- Not depends on substrate concentration b-Affected by substrate concentration.
  - c-There is no reaction.

مجموع درجات الاسئلة :-

### Answer the following question briefly

Q1/ what is the relationship between enzymes and metal ions?

Q2/ give the function of oxidoreductase?

# الرقم السري:

## Choose the correct answer (MCQ)

Q1/The most popular method for typing of Pseudomonas aeruginosa is
<u>A.</u> antibiogram <u>B.</u> serotyping <u>C.</u> bacteriophage <u>D.</u> pyocin
Q2/Which of the following conditions can be caused by <i>Plesiomonas</i> ?  A.Septicaemia <u>B.</u> Gastroenteritis <u>C.</u> Cellulites <u>D.</u> All of these
Q3/Which of the following condition is non-suppurative sequelae of Streptococcus pyogenes infections?  A-acute rheumatic fever B. Acute glomeralonephritis C. Erythematic Gullet is a heat-labile protein B. It is a neurotoxin C. It can be toxoided D. All of these
Q5/The test(s) used for the assay of cholera toxin is/are  A.Radioimmunoassay B.Enzyme-linked immunosorbent assay C.Morphological changes in Chinese D.All of the above
Q6/ Stormy clot reaction is useful in identification of <u>A.C tetani</u> <u>B.C botulinum</u> <u>C.C perfringens</u> <u>D.C difficile</u>
Q7/The bacteria which is novobiocin resistant is <u>A.Staphylococcus aureus</u> <u>B.S epidermidis</u> <u>C.S saprophyticus</u> <u>D.</u> None of these
Q8/Protein A is found in cell wall of
A.coagulase-negative staphylococci B.Staphylococcus aureus C.Micrococci D.none of these
Q9/ The bacteria which is microaerophilic on primary isolation, is <u>A.M fortuitum</u> <u>B.Mycobacterium tuberculosis</u> <u>C.M bovis</u> <u>D.</u> none of these
Q10/Which of the following is the commonest species of Salmonella for causing zoonotic disease? <u>A.S Indiana</u> <u>B.S Newport</u> <u>C.S typhimurium</u> <u>D.S enteritidis</u>
Q11/When heated exotoxin convert to:  a- Antitoxin b- toxoid c- toxication d- endotoxin
Q12/ True pathogen is the pathogen:  a- Possess factor for overcome immune response b- posses toxins c- posses enzymes d- all of them
Q13/ Normal flora important for body because can produce A- vit.C b-vit E c- vit K d- vit D

### الرقم السري:

### Choose the correct answer (MCQ)

### Q14/ Tsst produce by:

a- Salmonella typhi b-S. pyogenes C-E. coli d-S. aureus

### Q15/ Coagulase is the enzyme produce by and necessary for diagnosis $\,:\,$

a- S. aureus b- S. epidermidis c- S. saprophyticus d- S. haemolyticus

#### Q16/ Characteristic of endotoxin are

a- LPS b- heat stable c- have sugar moiety d- All of them

### Q17/ Streptoccus viridians isolated from

a- teeth infection b- UTI c-GI d- upper respiratory infection

### Q18/ example of non-invasive pathogen is:

a- Bordetella pertusis b- Shigella c- S. aureus d- S. pyogenes

#### Q19/ Pandemic infection means:

a- Disease in small area b- disease in specific time in small area c- disease in large area d- disease in specific country

#### Q20/ Type 1 pili found in:

a-S. aureus b- E. coli c - Enterobacter d- Proteus

# الرقم السري:

### Answer the following questions briefly

Q1/What is hemolytic uremic syndrome (HUS)?	
Q2/Does past infection with Yersinia make a person immune?	
Q3/Mention two bacteria can cause meningitis?	
Q4/ Mention the importance of pyrogenic toxin ?	
Q5/ What are the main symptoms of tetanus?	

# الرقم السري:

### الرقم السري:

### Choose the correct answer (MCO)

#### Q1/ IgA found on the:

a- mucosal surfaces b- Plasma cells surface c- B cells surface d- K cells surfaces

### Q2/ Colostrums (mothers milk for new born) is rich in:

a- IgM

b- IgG c- IgA d- digestive enzymes.

#### Q3/Complement has

a- classical pathway when activated only b- Two different pathways c- Three different pathways

d- one pathway always

### Q4/Precipitation is a reaction between

a- particulate antigen and antibody b- infected cell and antibodies c- IgD and parasite

d- soluble antigen and specific antibody

#### Q5/ Neutralization is a reaction between

a- bacteria and antibody b- virus and specific antibody d- parasites and lymphocytes

c- soluble antigen and antibody

### Q6/ The histocompatibility genes are needed to

a- stimulate immune response b- activate macrophage c- control and regulate immune response

d- Suppress immune response

### Q7/ Epitopes are

a- antibodies b- heptan c- binding site on antigen surface d- binding site on antibody surface

### Q8/Heptan lack the

a- immunogenicity b- antigen binging site c- regulation function d- immune proteins needed for activation

#### Q9/ All immune cells are born in

a- thymus b- lymphoid organs c- bone marrow d- thymus and bone marrow

### الرقم السرى:

### Choose the correct answer (MCQ)

#### Q10/Kupffer cells are phagocytic cells in

a-liver b-lung c-brain d-bones

#### Q11/Primary lympoid organs include

- a- thymus and bone marrow b- thymus and lymph nodes c- lymph nodes and bone marrow
- d- bone marrow and spleen

#### Q12/Interferon is a cytokine that gives resistance to

a- viral infection b- Bacterial infection c- autoimmune diseases d- Parasitic infection

# Q13/The human immunodeficiency virus interacts with one of the following cell-surface molecules to gain entry into cells of the immune system:

a. CD4 b. CD19 c. CD40 ligand d. CD8

### Q14/ All of the following are true about antibodies, EXCEPT which one?

- a-They occur on the surface of B-lymphocyte b-They are glycoproteins.
- c-They predominate the primary immune response to antigen. d-They are molecule with a single, defined amino acid sequence

#### Q15/Antigens are usually:

a- lipids b- Proteins c- Polysaccharides

#### Q16/IgM:

a- can pass placenta b- may induce hypersensitivity c- is the early immune response.

#### Q17/hapten to be immunogen needs:

a- polysaccharide b-adjuvants c- carrier d-nothing

#### Q18/The complementarity determining regions:

- a- Are restricted to light chains. b- Are in the constant part of the Ig molecule.
- c- Bind to Fc receptors. d- Are concerned in antigen recognition

### الرقم السرى:

### Choose the correct answer (MCQ)

#### Q19/ Interferons:

- a- Are found only in mammalian species.
- b-Induce enzyme synthesis in the target cell.
- c-Only affect infected cells.
- d- Are specific for viruses

# Q20/ The first immunoglobulin heavy chain class to be expressed on the surface of a newly produced

#### B-cell is:

- a- IgM
- b- IgA
- c- IgE
- d- IgG

#### Q21/ Epitope:

- a- part of T-cell
- b-part of antibody
- c-part of Ag
- d- all

#### Q22/ Complement has

- a- classical pathway when activated only b- Two different pathways c- Three different pathways
- d- one pathway always

### Q23/ Neutralization is a reaction between

- a- bacteria and antibody b- virus and specific antibody d- parasites and lymphocytes
- c- soluble antigen and antibody

### Q24/ Epitopes are

- a- antibodies
- b- heptan
- c- binding site on antigen surface d- binding site on antibody surface

### Q25/ Heptan lack the

b- antigen binging site c- regulation function d- immune proteins needed a- immunogenicity for activation

### Q26/ Primary lympoid organs include

- a- thymus and bone marrow b- thymus and lymph nodes c- lymph nodes and bone marrow
- d- bone marrow and spleen

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Answer the following questions briefly
Q1/What do we mean by agglutination reaction?
O2/ What is the main role of Major histogram of thillies completely in the
Q2/What is the main role of Major histocompatibility complex in immune response?
Q3/ Define: cytokine

Q4/Define superantigen with examples.

# الرقم السري:

Answer the following questions briefly
Q5/ Mention the gradual steps of phagocytosis.
Q6/ What is the first barrier of immune response?
07/What are the main about the investment of the control of the co
Q7/ What are the main characteristics in any vaccine to be suitable for human use?
Q8/ Why do usually prefer to use rabbits as experimental animal model in immunological experiment

v c

# اسم المادة: المناعة

# الرقم السري:

Answer the following questions briefly
Q9/ Define heterophile antigen
Q10/ list the polymorph nuclear cell?
Constant Programme Cont.
Q11/ Write main steps in phagocytosis?
Q12/ What is the main immunological function of langerhans cells ?
Q13/ What do we mean by immunological anergy?

## الرقم السري:

### Answer the following questions briefly

Q14/ why some vaccines should not be given to new born before one year of age?

Q15/ Compare between IgG and IgM?

Q16/ List all T cells types

### اسم المادة: التقنيات الاحيائية

### الرقم السري:

### Choose the correct answer (MCQ)

Q1/Production of cheese is

a-Modrin fermentation

b-Classical fermentation

c- Both of them

Q2/Abiotic stress tolerace include

a-Drough

b-Calinity

c-Herbicides

Q3/Which substrate is used in the fermentation of citric acid?

a.Beet molasses

b.Sucrose

c.Starch hydrolysate

d.All of these

Q4/Vinegar production consists of

a-aerobic fermentation

b.anaerobic fermentation

c.aerobic fermentation followed by anaerobic

fermentation

d.anaerobic fermentation followed by aerobic fermentation

مجموع درجات الاسئلة:-

### اسم المادة: التقنيات الاحيائية

### Answer the following questions briefly

Q1/Give reason for production of food allergic?

Q2/What are the disadvantages of biotechnology?

# اسم المادة: بايولوجي جزيئي

### الرقم السري:

## Choose the correct answer (MCQ)

Q1/Thymin dimer is mean:

- a- T=T in same strand b- T=T in opposite strand c- T=T unwind strands

Q2/The regulation of gene expression in eukaryotes called:

- b- Dicistronic
- b- monocistronic
- c- Polycistronic

ع درجات الاسئلة :-

### Answer the following questions briefly

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Q1/Discus: RNA molecules are usually much shorter than DNA?

Q2/Why okazaki fregments are formed during replication of DNA?