Mansoura University
Faculty of Medicine

Log Book

parasitology Department

2016 - 2017

ختم القسم

إيصال تسليم Log Book

اسم الطالب : .....

الفرقة : .....

رقم الجلوس : .....

تاريخ التسليم : .....

توقيع المستلم : .....

رسالــة الكلــية

"تقديم مستوى عال التميز فى التعليم والتدريب الطبى
وتقديم خدمات صحية متميزة للمجتمع
عن طريق المراكز الطبية المتخصصة
وكذلك الإرتقاء بالبحث العلمى"

رؤيــة الكلــية

"أن نصنف إقليميا ونحقق التميز فى التعليم الطبى
والبحوث وخدمة المجتمع"

Template
for Course Specifications
2015-2016

Faculty : Medicine
Department : Medical Parasitology

Course Specifications

Programme(s) on which the course is given :	M.B.B.ch
Major or minor element of programmes :	major
Department offering the programme :	Faculty of Medicine
Department offering the course :	Medical Parasitology Department
Academic year / level :	3rd year medical students
Date of specification approval :	4/2016

A- Basic information

Title: Medical Parasitology Code: PAR
Lecture: 2 h Tutorial ½ h Practical 2 h Total: 4½ h (hour/week)
Total hours: 120 hours

B- Professional Information

1 - Overall Aims of Course

The main aim of medical parasitology course is to provide the student with:

-**Knowledge** essential for the general practitioner related to parasites of medical significance regarding their biology and life cycle; host parasite relationship; environmental and host factors regulating parasitic diseases transmission pattern and how to prevent it; parasites causing alternation in the structure and function of human organs and the different methods of management and control of parasitic diseases.

- **Skills and attitude** of observation, interpretation and integration of data needed to diagnose human parasitic infections.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding

a.1. Describe the morphological characteristics, life cycles, methods of transmission of medically important helminthes.

a.2. Recognize the morphological characteristics, life cycles, methods of transmission of medically important Protozoa.

a.3. Describe the morphological characteristics, life cycles and recognize diseases caused or transmitted by medically important Arthropods.

a.4. Illustrate the geographical distribution of important parasites.

a.5. Explain how parasites harm their hosts and the major immunological responses underlying this.

a.6. Discuss clinical picture associated with parasitic infections.

a.7. List the different diagnostic techniques for detecting parasites.

a**.8.** Describe the plan of treatment of each parasitic disease.

a.9. List the preventive measures to avoid parasitic infections..

b- Intellectual Skills

b1- Interpret different clinical presentations and correlate them to suspected parasites

b2 Choose the suitable diagnostic techniques concerning the parasitic problems encountered (microscopy, serology or molecular.. etc)

b3- Differentiate and compare similar stages of different parasites.

b4- Plan a control program for a particular parasitic disease

c-Professional and Practical Skills

c1- Manage infectious material in a lab and apply the proper measures of infection control

c3 Elicit findings in mounted slides and identify different parasites
c3- Elicit findings in laboratory specimens.
c4- Interpret the results of examination of parasitic specimens.

D-General and Transferable Skills

d1 Retrieve recent data from web sites
d2 Acquire presentation skills
d3 Work productively in a team.
d4 Communicate effectively and respectively with colleagues, supervisors and staff members

3 – Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Introduction	3	2	1
Trematodes • Liver fluks • Heterophyes + lung fluks • Schistosomes	 6 4 5	7	8
Cestodes • Diphyllobothrium • Sparganosis • Taenia • cysticercosis • Hydatid disease • Coenurosis • Hymenolepis • Dipylidum	 1 2 1 2 2 1 1 1	5	6
Nematodes • Ascaris+ Toxocara • Hook worms + Enterobius • Strongyloides + Larva Migrans • Trichuris+capillaria • Trichinella • Filaria	 5 5 5 5 3 5	12	16
Protozoa • Amoeba • flagelates • Apicomplexia • Cilliates	 10 10 10 2	16	16
Arthropods • Insecta • Archnida • Crustacea	 7 7 7	10	11
Immunology of parasitic diseases.	2	2	
Zoonoses	1	1	
Nosocomial and opportunistic parasitic infections	1	1	
Molecular parasitology	2	2	
Laboratory techniques	4	2	2

4 – Teaching and Learning Methods

4.1- Lectures.: small group teaching
4.2- Practical lessons
4.3- Tutorial sessions after the practical lessons
4.4- Enhancing self learning of students (students' presentations)

5 – Student Assessment Methods :

	A									B				C				D			
	A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
Written Exams: (Short Essays)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
Written Exams: (MCQ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
Structured Oral Exams	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓								
Objective Structured Practical Exams (OSPE)	✓	✓	✓							✓	✓	✓			✓	✓	✓				✓
Student presentation														✓				✓	✓	✓	✓

Assessment Schedule

Assessment 1 Mid Term exam: at the end of the 1st term
Assessment 2 Final written exam: at the end of the year
Assessment 3 Structured Oral exam: at the end of the year
Assessment 4 Objective Structured practical exam: at the end of the year
Assessment 5 Semester work (student presentation) and log book

Weighting of Assessments (Mark+ percentage)

Mid-Term Examination	(25 marks)	16.7%
Final-Term Examination	75 marks	50%
MCQs	25 marks	33%
Short essay questions	50 marks	67%
Structured Oral Examination	15 marks	10%
Objective Structured Practical Exams (OSPE)	30 marks	20%
Semester work and log book	5 marks	3.3%
Total	150 marks	100%

6 – List of References

6.1- Course Notes
1- Practical notes
2- MCQ and clinical cases notes

6.2- Essential Books (Text Books)
Department book
Clinical Parasitology . A Practical Approach,2013

6.3- Recommended Books
a-Basic clinical Parasitology (Brown and Neva)
b- Colored Atlas of Parasitology
c- Medical Parasitology (Markell, vogue, and John)
d- Tropical medicine and Parasitology (peters and Gills)

6.4- Periodicals, Web Sites, …etc
-Parasitology today (Trends in Parasitlogy) Journal.
- Advanced pubmed web sites.
- CDC website.

7 – Facilities Required for Teaching and Learning

1- Microscopes (binocular).
2- Microscopic slides.
3- Data-show projector.
4- Smart board.

Course ILOs matrix

a. Knowledge and Understanding

	a1	a2	a3	a4	a5	a6	a7	a8	a9
Introduction	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trematodes	✓			✓					
Cestodes	✓			✓					
Nematodes	✓			✓					
Protozoa		✓		✓					
Arthropods			✓	✓					
Immunology of parasitic diseases.							✓		
Zoonoses									✓
Nosocomial and opportunistic parasitic infections									✓
Molecular parasitology							✓		
Laboratory techniques									✓

b. Intellectual Skills:

	b1	b2	b3	b4
Introduction				✓
Trematodes	✓	✓	✓	✓
Cestodes	✓	✓	✓	✓
Nematodes	✓	✓	✓	✓
Protozoa	✓	✓	✓	✓
Arthropods	✓	✓	✓	✓
Immunology of parasitic diseases.	✓	✓	✓	✓
Zoonoses	✓	✓	✓	✓
Nosocomial and opportunistic parasitic infections	✓	✓	✓	✓
Molecular parasitology			✓	✓
Laboratory techniques			✓	✓

c. Professional and Practical Skills

	C1	C2	C3	C4
Introduction				
Trematodes		✓	✓	✓
Cestodes		✓	✓	✓
Nematodes		✓	✓	✓
Protozoa		✓	✓	✓
Arthropods		✓	✓	✓
Immunology of parasitic diseases.				
Zoonoses				✓
Nosocomial and opportunistic parasitic infections				
Molecular parasitology			✓	✓
Laboratory techniques	✓		✓	✓

d- General and Transferable Skills

	D1	D2	D3	D4
Introduction			✓	
Trematodes	✓			
Cestodes				
Nematodes	✓			
Protozoa	✓			
Arthropods	✓			
Immunology of parasitic diseases.				
Zoonoses	✓	✓	✓	
Nosocomial and opportunistic parasitic infections	✓		✓	
Molecular parasitology	✓			
Laboratory techniques	✓	✓	✓	✓

Course Coordinator : Dr. Nora Ibrahim

Head of Department : Prof. Dr. Hala Ahmed Elnahas

Blueprint of Parasitology Department

3rd Year Students

Total lectures hours: 120

Theoretical total mark: 100

Wt. % 100/120 = 0.83%

Total mark distribution on the exam:

Midyear MCQ	Final MCQ	Final written	total
25	25	50	100

Topic	Teaching hours	Relative hours	Marks
Introduction	**3**	**0.025**	**2.49**
Liver fluks	**6**	**0.05**	**4.98**
Heterophyes + lung fluks	**4**	**0.033**	**3.32**
Schistosomes	**5**	**0.041**	**4.15**
Diphyllobothrium	**1**	**0.008**	**0.83**
Sparganosis	**2**	**0.016**	**1.66**
Taenia	**1**	**0.008**	**0.83**
cysticercosis	**2**	**0.016**	**1.66**

Topic	Teaching hours	Relative hours	Marks
Hydatid disease	**2**	**0.016**	**1.66**
Coenurosis	**1**	**0.008**	**0.83**
Hymenolepis	**1**	**0.008**	**0.83**
Dipylidum	**1**	**0.008**	**0.83**
Ascaris+ Toxocara	**5**	**0.041**	**4.15**
Hook worms, Enterobius	**5**	**0.041**	**4.15**
Strongyloides, Larva Migrans	**5**	**0.041**	**4.15**
Trichuris+capillaria	**5**	**0.041**	**4.15**
Trichinella	**3**	**0.025**	**2.49**
Filaria	**5**	**0.041**	**4.15**
Amoeba	**10**	**0.08**	**8.3**
flagelates	**10**	**0.08**	**8.3**
Apicomplexia	**10**	**0.08**	**8.3**
Cilliates	**2**	**0.016**	**1.66**
Insecta	**7**	**0.058**	**5.81**
Archnida	**7**	**0.058**	**5.81**

Topic	Teaching hours	Relative hours	Marks
Crustacea	**7**	**0.058**	**5.81**
Immunology of parasitic diseases	**2**	**0.016**	**1.66**
zoonosis	**1**	**0.008**	**0.83**
Nosocomial & opportunistic parasitic infection	**1**	**0.008**	**0.83**
Molecular parasitology	**2**	**0.016**	**1.66**
Laboratory techniques	**4**	**0.033**	**3.32**

Selective Mark distribution for each topic in the exam

Topic	Teaching hours	Relative hours	Marks	Midyear Exam	Final Exam
Introduction	**3**	**0.025**	**(2.49)2.5**	**1**	**1.5**
Liver fluks	**6**	**0.05**	**(4.98)5**	**2**	**3**
Heterophyes + lung fluks	**4**	**0.033**	**(3.32)3**	**1**	**2**
Schistosomes	**5**	**0.041**	**(4.15)4**	**1**	**3**
Diphyllobothrium	**1**	**0.008**	**(0.83)1**	**-**	**1**
Sparganosis	**2**	**0.016**	**(1.66)2**	**1**	**1**
Taenia	**1**	**0.008**	**(0.83)1**	**1**	**-**
cysticercosis	**2**	**0.016**	**(1.66)2**	**1**	**1**
Hydatid disease	**2**	**0.016**	**(1.66)2**	**1**	**1**
Coenurosis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Hymenolepis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Dipylidum	**1**	**0.008**	**(0.83)1**	**1**	**-**
Ascaris+ Toxocara	**5**	**0.041**	**(4.15)4**	**2**	**2**
Hook worms + Enterobius	**5**	**0.041**	**(4.15)4**	**2**	**2**
Strongyloides + Larva Migrans	**5**	**0.041**	**(4.15)4**	**2**	**2**
Trichuris+capillaria	**5**	**0.041**	**(4.15)4**	**3**	**1**
Trichinella	**3**	**0.025**	**(2.49)2.5**	**1.5**	**1**
Filaria	**5**	**0.041**	**(4.15)4**	**2**	**2**
Amoeba	**10**	**0.08**	**(8.3)8**	**-**	**8**
flagelates	**10**	**0.08**	**(8.3)8**	**-**	**8**
Apicomplexia	**10**	**0.08**	**(8.3)8**	**-**	**8**
Cilliates	**2**	**0.016**	**(1.66)2**	**-**	**2**
Insecta	**7**	**0.058**	**(5.81)6**	**-**	**6**
Archnida	**7**	**0.058**	**(5.81)6**	**-**	**6**
Crustacea	**7**	**0.058**	**(5.81)6**	**-**	**6**
Immunology of parasitic diseases	**2**	**0.016**	**(1.66)2**	**-**	**2**

Topic	Teaching hours	Relative hours	Marks	Midyear Exam	Final Exam
zoonosis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Nosocomial & opportunistic parasitic infection	**1**	**0.008**	**(0.83)1**	**-**	**1**
Molecular parasitology	**2**	**0.016**	**(1.66)2**	**-**	**2**
Laboratory techniques	**4**	**0.033**	**(3.32)3**	**3**	**-**

Mansoura University

Faculty of Medicine

Medical Parasitology Department

Medical Parasitology Department

3rd Year Medical Students

Student's Logbook

Personal data

Student's name:

Student's ID:

Section number:

Section supervisors:

Preface

Dear students

Welcome to the Department of Medical Parasitology at the beginning of the third year of medical education. The Department's mission is to enhance the international stature of Mansoura Faculty of Medicine by combining high quality teaching with internationally recognized research.

This booklet is a document of your attendance and your activities during the practical classes (specimen and slide identification) and the students presentation.

Lastly, I wish you a useful and applicable study of medical Parasitology during this year.

Head of the department
Prof Dr. Hala Ahmed Gaber El-Nahas

A. Basic information:

Title: Medical Parasitology

Total marks: 150

Code: PAR

Program (s) on which this course is given: M.B.B.cH

Year / level of program: 3rd year Medical students**.**

Lectures: 2 hours/week

Practical: 2 hours/week

Student presentation ½ hours / week

Total teaching hours: 4 ½ hours / week.

B- Professional Information:

A- Professional Information

1 - Overall Aims of Course

The main aim of medical Parasitology course is to cover knowledge, comprehension and application of medical Parasitology essential for the general practitioner. By the end of the course , students are expected to be able to:

1-Know the basic concepts related to parasites of medical significance regarding their biology and life cycle.

2- Understand host parasite relationship, environmental and host factors regulating parasitic diseases transmission pattern and how to prevent it.

3- Recognize parasites causing alternation in the structure and function of human organs.

4- develop skills of observation , interpretation and integration needed to analyze human parasitic infections.

5-Highlight the different methods of management and control of parasitic diseases.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding

a1. Describe the morphological characteristics, life cycles, methods of transmission of medically important helminths.

a2. Mention the morphological characteristics, life cycles, methods of transmission of medically important Protozoa.

a3. Describe the morphological characteristics, life cycles and recognize diseases caused or transmitted by medically important Arthropods.

a4. Point out the geographical distribution of important parasites.

a5. Explain how parasites harm their hosts and the major immunological responses underlying this.

a6. Discuss clinical picture associated with parasitic infections.

a7. List the different diagnostic techniques for detecting parasites.

a**8.** Outline the plan of treatment of each parasitic disease.

a9. Name the preventive measures to avoid parasitic infections..

b- Intellectual Skills

b1. interpret different clinical presentations and correlate them to suspected parasites
b2. Choose the suitable diagnostic techniques concerning the parasitic problems encountered (microscopy , serology or molecular … etc)
b3. Differentiate and compare similar stages of different parasites.
b4. Plan a control program for a particular parasitic disease

c-Professional and Practical Skills

C1. Use the light microscopy.
C2. Examine mounted slides and identify different parasites
C3. Examine laboratory specimens.
C4. Interpret the results of examination of parasitic specimens.

d-General and Transferable Skills

d1 Review the scientific literature on a research topic
d2 Retrieve recent data from web sites
d3 Acquire presentation skills
d4 Work productively in a team.
d5 Manage infectious material in a lab and apply the proper measures of infection control
d6 Communicate effectively and respectively with colleagues, supervisors and staff members

C-Student assessment:

method of assessment	Marks	percentage of total
Mid year examination	**25**	**16.7%**
Log book and Student presentation	**5**	**3.3 %**
Practical	**30**	**20 %**
structured oral examination	**15**	**10 %**
Final written examination	**75 (25 MCQs 50 Short Essay)**	**50 %**

D- Teaching and Learning Methods:

- Lectures.

- Practical lessons.

- Tutorial sessions after the practical lessons.

- Enhancing self learning of students by preparing a power point presentation on one of the parasitic diseases.

Curriculum Content

Part I:

Introduction & helminthology

-**Introduction to parasitology**

-Helminthology:

***Trematoda**

-Introduction & liver flukes

-Intestinal flukes

- Pulmonary flukes

-Blood flukes

***Cestoda**

-Introduction

-*Diphyllobothrium species*

-*Taenia* species

-*Echinococcus s*pecies & *Multiceps multiceps*

-*Hymenolepis* species

-Extraintestinal Cestodes

***Nematoda**

Intestinal nematodes

-Introduction

-*Ascaris lumbricoides*

-*Trichuris trichiura*

-*Enterobius vermicularis*

-*Hook worms*

-*Trichostrongylus & Strongyloides*

-*Capillaria philippinensis*

-*Trichinella spiralis*

Tissue nematodes

-*Dracunculus medinensis*

-*Wuchereria bancrofti & Brugia malayi*

-*Onchocerca volvulus & Loa loa*

-Larva migrans (visceral and cutaneous).

Part 2:

Protozoology

Intestinal protozoa

- Introduction & *Entamoeba histolytica*

-Commensal amoebae & *Balantidium coli*

-*Giardia lamblia*

-*Cryptosporidium parvum*

-*Cyclospora & cystoisospora*

-Urogenital protozoa

Blood & tissue protozoa

-*Plasmodium* species

-*Leishmania* species

-*Trypanosomes*

-*Toxoplasma gondii*

-Free living amoebae

- Opportunistic protozoa

Part 3:

Entomology

-Introduction & Mosquitoes
-*Phlebotomus spp, Simulidae ceratopogonidae & Tabanidae*
-*Muscidae*

-*Calliphoridae& Oestridae*, Myiasis
-Fleas –Lice –Bugs
-Ticks
-Mites
-Scorpion –Cyclops
-Control of arthropods & Insecticides

Part 4:

Immunology & molecular parasitology

-Types of immunity & mechanisms

-Vaccination, immunopathology.

-Molecular Parasitology.

-Evasion.

-Immunodiagnosis.

Part 5:

Laboratory diagnostic techniques

- Attendance of Classroom Teaching

Date	Topic	Student presentation	Staff name & signature
1st week			
2nd week			
3rd week			
4th week			
5th week			
6th week			
7th week			
8th week			
9th week			

10th week			
11th week			
12th week			
13th week			
14th week			
15th week			
16th week			
17th week			
18th week			
19th week			
20th week			

21st week			
22nd week			
23rd week			
24th week			
25th week			
26th week			
27th week			
28th week			
29th week			
30th week			

Questions and comments

Self learning

Self learning

Quiz 1

Quiz 2

Blueprint of Parasitology Department

3rd Year Students
Total lectures hours: 120
Theoretical total mark: 100
Wt. % 100/120 = 0.83%

Total mark distribution on the exam:

Midyear MCQ	Final MCQ	Final written	total
25	25	50	100

Topic	Teaching hours	Relative hours	Marks
Introduction	**3**	**0.025**	**2.49**
Liver fluks	**6**	**0.05**	**4.98**
Heterophyes + lung fluks	**4**	**0.033**	**3.32**
Schistosomes	**5**	**0.041**	**4.15**
Diphyllobothrium	**1**	**0.008**	**0.83**
Sparganosis	**2**	**0.016**	**1.66**
Taenia	**1**	**0.008**	**0.83**
cysticercosis	**2**	**0.016**	**1.66**
Topic	Teaching hours	Relative hours	Marks
Hydatid disease	**2**	**0.016**	**1.66**
Coenurosis	**1**	**0.008**	**0.83**
Hymenolepis	**1**	**0.008**	**0.83**
Dipylidum	**1**	**0.008**	**0.83**
Ascaris+ Toxocara	**5**	**0.041**	**4.15**
Hook worms, Enterobius	**5**	**0.041**	**4.15**
Strongyloides, Larva Migrans	**5**	**0.041**	**4.15**

Trichuris+capillaria	**5**	**0.041**	**4.15**
Trichinella	**3**	**0.025**	**2.49**
Filaria	**5**	**0.041**	**4.15**
Amoeba	**10**	**0.08**	**8.3**
flagelates	**10**	**0.08**	**8.3**
Apicomplexia	**10**	**0.08**	**8.3**
Cilliates	**2**	**0.016**	**1.66**
Insecta	**7**	**0.058**	**5.81**
Archnida	**7**	**0.058**	**5.81**
Topic	Teaching hours	Relative hours	Marks
Crustacea	**7**	**0.058**	**5.81**
Immunology of parasitic diseases	**2**	**0.016**	**1.66**
zoonosis	**1**	**0.008**	**0.83**
Nosocomial & opportunistic parasitic infection	**1**	**0.008**	**0.83**
Molecular parasitology	**2**	**0.016**	**1.66**
Laboratory techniques	**4**	**0.033**	**3.32**

Selective Mark distribution for each topic in the exam

Topic	Teaching hours	Relative hours	Marks	Midyear Exam	Final Exam
Introduction	**3**	**0.025**	**(2.49)2.5**	**1**	**1.5**
Liver fluks	**6**	**0.05**	**(4.98)5**	**2**	**3**
Heterophyes + lung fluks	**4**	**0.033**	**(3.32)3**	**1**	**2**
Schistosomes	**5**	**0.041**	**(4.15)4**	**1**	**3**
Diphyllobothrium	**1**	**0.008**	**(0.83)1**	**-**	**1**
Sparganosis	**2**	**0.016**	**(1.66)2**	**1**	**1**
Taenia	**1**	**0.008**	**(0.83)1**	**1**	**-**
cysticercosis	**2**	**0.016**	**(1.66)2**	**1**	**1**
Hydatid disease	**2**	**0.016**	**(1.66)2**	**1**	**1**

Coenurosis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Hymenolepis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Dipylidum	**1**	**0.008**	**(0.83)1**	**1**	**-**
Ascaris+ Toxocara	**5**	**0.041**	**(4.15)4**	**2**	**2**
Hook worms + Enterobius	**5**	**0.041**	**(4.15)4**	**2**	**2**
Strongyloides + Larva Migrans	**5**	**0.041**	**(4.15)4**	**2**	**2**
Trichuris+capillaria	**5**	**0.041**	**(4.15)4**	**3**	**1**
Trichinella	**3**	**0.025**	**(2.49)2.5**	**1.5**	**1**
Filaria	**5**	**0.041**	**(4.15)4**	**2**	**2**
Amoeba	**10**	**0.08**	**(8.3)8**	**-**	**8**
flagelates	**10**	**0.08**	**(8.3)8**	**-**	**8**
Apicomplexia	**10**	**0.08**	**(8.3)8**	**-**	**8**
Cilliates	**2**	**0.016**	**(1.66)2**	**-**	**2**
Insecta	**7**	**0.058**	**(5.81)6**	**-**	**6**
Archnida	**7**	**0.058**	**(5.81)6**	**-**	**6**
Crustacea	**7**	**0.058**	**(5.81)6**	**-**	**6**
Immunology of parasitic diseases	**2**	**0.016**	**(1.66)2**	**-**	**2**
Topic	Teaching hours	Relative hours	Marks	Midyear Exam	Final Exam
zoonosis	**1**	**0.008**	**(0.83)1**	**1**	**-**
Nosocomial & opportunistic parasitic infection	**1**	**0.008**	**(0.83)1**	**-**	**1**
Molecular parasitology	**2**	**0.016**	**(1.66)2**	**-**	**2**
Laboratory techniques	**4**	**0.033**	**(3.32)3**	**3**	**-**