جامعة اسيوط (يونيو 2016) المادة : التفكير العلمى
كلية العلوم رقم المادة : 14 م ج الزمن : ساعتان

سؤال اجبارى : (20 درجة)

الانسان يصطنع منهجا يتيح له الاتصال المباشر بالواقع ، عن طريق الجمع بين العقل والتجربة ، إلا فى مرحلة متأخرة من تاريخه . فلا بد إذن أن عقبات أساسية حالت دون تحقيق هذا الاتصال المباشر بين الإنسان والعالم عن طريق العلم . فما هى هذه العقبات التى أخرت ظهور العلم ، والتى لاتزال تشوه صورة المعرفة العلمية حتى يومنا هذا عند فئات كثيرة من البشر ؟

اجب عن سؤالين فقط

السؤال الاول : (15 درجة)

التفكير العلمى هو ذلك النوع من التفكير المنظم .. الذى يمكن ان نستخدمة فى شئون حياتنا اليومية .. أو فى النشاط الذى نبذله حين نمارس أعمالنا المهنية المعتادة .. أو فى علاقاتنا مع الناس ... تكلم بالتفصيل عن سمات التفكير العلمى .

السؤال الثانى : (15 درجة)

ليس العلم ظاهرة منعزلة ، تنمو بقدرتها الذاتية وتسير بقوة دفعها الخاصة وتخضع لمنطقها الداخلى البحت ، بل أن تفاعل العلم مع المجتمع حقيقة لا ينكرها أحد . تكلم بالتفصيل عن الابعاد الاجتماعية للعلم المعاصر.

السؤال الثالث : (15 درجة)

وضح الاتى : 1- العناصر الاخلاقية فى شخصية العالم .

2- العلاقه بين العلم و التكنولوجيا.

تمنياتى لكم بالتوفيق

أ.د. محمد زيدان

كلية العلوم الفصل الدراسي الثاني ٢٠١٥/١٢ ٢٠١٦ م	امتحان لطلاب كليه العلوم المستوي الاولي تاريخ العلوم	الزمن: ساعتان المادة: تاريخ العلوم(١٢م.ج) اليوم: الاحد التاريخ: ٢٠١٦/٦/١٩م

أجب عن جميع الاسئلة الاتيه

السؤال الاول: ضع علامة صح او خطا امام العبارات الاتية: **(٣٠ درجة)**

(١)يعتبر ابن ملكا من الرواد الاوائل في علم الارض ( )

(٢) يعتبر اقليدس من مؤسسي علم الجبر في عصرة عند اليونانين ( )

(٣)من اشهر علماء العرب في الاحياء ابن الهيثم ( )

(٤) من اهم انجازات الخازن هو كتاب القانون المسعودي ( )

(٤)الجاحظ اول من لقب بشيخ النباتين العرب وله كتاب الجامع لصفات اشتات النبات ( ).

(٦) يعتبر ارسطو اول من وضع طريقة للتقطير في العالم ( ).

(٧) تعتبر النسبية العامة الزمن لا يمثل احد الابعاد الاساسية في الكون ( ).

(٨) هيتون هو اول من قال ان الارض تشبه صدفة محاطه بالمياه وان السماء تغطي هذه الصدفة( )

(٩) يعتبر الدينوري اول من الف موسوعة القانون ( ).

(١٠) اول من ابتكر مخدر قبل الجراحه وسماه المرقد هو ابو سينا ( ).

السوال الثاني: **(١٠ درجة)**

(أ) اذكر اسهامات العرب في تطورعلم الارض.

(ب) أذكر أهم عشر علماء ساهموا في تطور العلوم عبر التاريخ من وجهة نظرك.

السوال الثالث: **(١٠ درجة)**

(أ) اكتب شرح مبسط للنظرية النسبية لاينشتاين.

(ب) تكلم عن تطور علم الارقام عبر التاريخ.

مع تمنياتي لكم بالتوفيق

أستاذ دكتور \ أحمد ماهر عبدالباسط

Ministry of Higher Education
Assiut University
Faculty of Science

Final Exam
Term II, Year: 2015/2016
Second Year
Course Title: English Language (2)
Date of Exam: Wednesday 15/6/2016
Time Allotted: 120 Minutes

Answer the following questions:

Part I: Read the following passage *Carefully*, then answer the Questions below. **(20 points)**

Thomas Edison was born February 11, 1847 in Milan, Ohio. He was nicknamed "Al" at an early age. At age 11, Edison moved to Michigan where he spent the remainder of his childhood.

Thomas Edison struggled at school, but learned to love reading and conducting experiments from his mother who taught him at home. At age 15, Edison became a "tramp telegrapher", sending and receiving messages via morse code, an electronically-conveyed alphabet using different clicks for each letter. Eventually, he worked for the Union Army as a telegrapher. Edison often entertained himself by taking things apart to see how they worked. Soon, he decided to become an inventor.

In 1870, Edison moved to New York City and improved the stock ticker. He soon formed his own company that manufactured the new stock tickers. He also began working on the telegraph, and invented a version that could send four messages at once. Meanwhile, Edison married Mary Stillwell, had three children and moved his family to Menlo Park, New Jersey where he started his famous laboratory.

In 1877, Edison, with help from "muckers", individuals from around the world looking to make fortunes in America, invented the phonograph. The phonograph was a machine that recorded and played back sounds. He perfected the phonograph by recording "Mary had a Little Lamb" on a piece of tin foil! In 1878, Edison invented the light bulb as well as the power grid system, which could generate electricity and deliver it to homes through a network of wires. He subsequently started the Edison Electric Light Company in October of 1878.

In 1884, after he attained great fame and fortune, Mary Stillwell died: Edison remarried 20 year-old Mina Miller in 1886. He had three more children and moved to West Orange, New Jersey. At West Orange, Edison built one of the largest laboratories in the world. He worked extremely hard and registered 1,093 patents.

Edison continued to invent or improve products and make significant contributions to x-ray technology, storage batteries and motion pictures (movies). He also invented the world's first talking doll. His inventions changed the world forever. They still influence the way we live today. Edison worked until his death on October 18, 1931.

Questions:

1. **In what state did Thomas Edison NOT live?**
   a. Michigan
   b. Ohio
   c. Massachusetts
2. **How many children did Thomas Edison have?**
   a. 3
   b. 5
   c. 6
3. **What best describes Morse Code?**
   a. A language for deaf people
   b. A system of clicks that stand for letters
   c. A system of clicks that stand for words
4. **What was one of Thomas Edison's first accomplishments?**
   a. Inventing an improved stock ticker
   b. Inventing an improved x-ray
   c. Inventing tin foil
5. **A phonograph is most similar to:**
   a. A walkie-talkie
   b. A record player
   c. A television
6. **What is a "mucker"?**
   a. Someone from another country
   b. Someone from another country hoping to find a home in America
   c. Someone from another country hoping to make a fortune in America
7. **Select all of the following that Thomas Edison did not invent.**
   a. The first storage battery
   b. A power system that could deliver electricity to homes
   c. The first stock ticker
8. **What does the quote "Genius is 1 percent inspiration and 99 percent perspiration" mean?**
   a. Only geniuses should think of new ideas
   b. Geniuses have to sweat a lot to come up with good ideas.
   c. Great ideas take more hard work than ingenuity

Assiut University
Faculty of Science
Second Semester Final Examination
(June 2016)

Subject: English Language I **Code:** 015UR
Students: Level One **Time Allowed:** 2 hours

I- Identify the topic sentence in the following paragraph: (4 marks)

Some people leave too many lights on around the house. Some aren't careful about how much water they use. Americans waste a lot of resources. Most people buy products with a lot of unnecessary packaging that isn't good for the environment.

II- Find out the irrelevant sentence in the following paragraph: (4 marks)

Mr. Phillips is the principal of Lake Ridge School. He makes announcements every morning at 8:15 to greet all students and to get the day started. Every morning he makes a quick visit to all the classes and usually waves to the students. Mr. Phillips also walks around in the cafeteria to make sure students are safe. He likes to eat tacos. He also directs traffic on the cross walk at the end of each day.

III- Read the following passage then answer the questions below: (18 Marks)

When you imagine the desert, you probably think of a very hot place covered with sand. Although this is a good description for many deserts, Earth's largest desert is actually a very cold place covered with ice: Antarctica.

In order for an area to be considered a desert, it must receive very little rainfall. More specifically, it must receive an average of less than ten inches of precipitation—which can be rain, sleet, hail, or snow—on the ground every year. Antarctica, the coldest place on earth, has an average temperature that usually falls below the freezing point. And because cold air holds less moisture than warm air, the air in Antarctica does not hold much moisture at all. This is evident in the low precipitation statistics recorded for Antarctica. For example, the central part of Antarctica receives an average of less than 2 inches of snow every year. The coastline of Antarctica receives a little bit more—between seven and eight inches a year. Because Antarctica gets so little precipitation every year, it is considered a desert.

When precipitation falls in hot deserts, it quickly evaporates back into the atmosphere. The air over Antarctica is too cold to hold water vapor, so there is very little evaporation. Due to this low rate of evaporation, most of the snow that falls to the ground remains there permanently, eventually building up into thick ice sheets. Any snow that does not freeze into ice sheets becomes caught up in the strong winds that constantly blow over Antarctica. These snow-filled winds can make it look as if it is snowing. Even though snowfall is very rare there, blizzards are actually very common on Antarctica.

1) The main purpose of paragraph 1 is to

A. accept a conclusion B. introduce an argument
C. provide a brief history D. deny a common belief

(Go to the back of this sheet)

2) The best title for this passage would be

A. Earth's Many Deserts
B. Antarctica: The Coldest Place on Earth
C. A Desert of Ice
D. Unusual Blizzards

3) Africa's Sahara Desert is the second-largest desert on earth. Based on the information in the passage, what characteristic must the Sahara share with Antarctica?

A. low temperatures
B. high temperatures
C. frequent blizzards
D. low precipitation

4) As used in paragraph 2, which is the best definition for <u>precipitation</u>?

A. moisture in the air that falls to the ground
B. any type of weather event
C. weather events that only happen in very cold areas
D. a blizzard that occurs in areas with limited snowfall

5) In paragraph 2 the author writes, "And because cold air holds less moisture than warm air, the air in Antarctica does not hold much moisture at all." Using this information, it can be understood that

A. air in Africa holds more moisture than the air in Antarctica
B. air surrounding a tropical island holds less moisture than the air in Antarctica
C. air in the second floor of a house is typically warmer than air on the first floor
D. air at the mountains is typically colder than the air at the beach

6) Based on the information in the final paragraph, it can be understood that blizzards in Antarctica are mainly the result of

A. freezing cold temperatures
B. large amounts of snowfall
C. low amounts of precipitation
D. strong winds

IV- <u>Correct the following sentences</u>: **(24 Marks)**

1) Each of the girls sing well.
2) Fifty percent of the pie have disappeared.
3) Ten dollars are a high price to pay.
4) Neither she nor they was willing to predict the election.
5) Please give it to John or myself.
6) Whoever you elect will serve a four-year term.
7) Some of the pies is missing.
8) You should check your spelling, grammar, and punctuating.
9) The order was requested six weeks ago, therefore I expected the shipment to arrive by now.
10) I must study english and math.
11) The folder, not the letters, were misplaced.
12) He is not unwilling to help.

(Best Wishes)

Examiners:

Dr. Sherin Abdel Ghaffar
Dr. Yasser Ahmed Gomaa

(1)

Answer the Following Questions: (50 marks)

Q1. (10 marks)

Choose the correct answer :

1) Given the matrix input in Matlab A = [1 5 7; 2 6 4; 3 8 2], which value is referenced by A(2:3,end)?
   a) [2 7]
   b) [6 2]
   c) $[1\ 3]^T$
   d) $[4\ 2]^T$

2) Let x = [0 0 1 1]. Which command creates a vector x

   a) x=0:1
   b) x=[zeros(1,2) ones(1,2)]
   c) x=ones+zeros
   d) x=[zeros(1,2) ; ones(1,2)]

3) Which one creates a vector of the odd whole numbers between 31 and 75.

   a) 31,2,75
   b) linspace(31,75,2)
   c) linspace(31,75,23)
   d) 31:3:75

4) Which Matlab command is usually used to generate random numbers?
   a) mod b) for c) rand d) exp

5) Let x = [3 2 6 8] and y = [4 1 3 5]. What is the result of min([x;y])
   a) 1
   b) [3 1 3 5]
   c) [2 1]
   d) [1 2]

(2)

Q2. (15 marks)

2.1 Find and Correct the errors in the following MATLAB codes

a)	b)

function fac=ff(s)
fac=1;
for i = 50:1
fac=fac*b;
i=i-1
end
	x=rand(2,2)
	y=ones(2,1)
	z=x*y
	clc(x)

2.2 Write a MATLAB function that computes the summation of 15 elements of the matrix X where

$$X(1) = 0,\ X(2) = 1,\ X(i) = X(i-1) + X(i-2),\quad i = 3,4,\ldots,15$$

Q3.	Write an algorithm and draw a flowchart to print the square of all numbers from LOW to HIGH. Test with LOW=50 and HIGH=100.	(10 marks)

Q4. **4.1 Write the output of the following M-file** (15 marks)

a)	b)

s=[5 2 7]
 	
for i =1:length(s)
k=length(s)+1;
y(k-i)=s(i);
end
disp(y)
	x=5;
	while(x==5)
	d=x^2;
	x=x/5;
	end
	disp(x)
	disp(d)

4.2 Write a MATLAB function to compute the roots of quadratic equation

$$a\,x^2 + bx + c = 0$$

Best Wishes

Department of Mathematics		قسم الرياضيات
Faculty of Science		كلية العلوم

امتحان نهائى للفصل الدراسي الثانى ٢٠١٥ /٢٠١٦م

الفرقة : اولى علوم – شعبة كيماء صناعية + شعبة جيولوجيا البترول

اسم المقرر: رياضيات عامة (١٠٥ ر)	الدرجة الكلية ٥٠ درجة	التاريخ: ٦ / ٦ / ٢٠١٦ م الزمن: ساعتين

Answer the following questions

First: The integration: (25 mark)

(1)Find the following integrals:

$$(a)\int \sin^5 x\cos^6 x\,dx\ ,\quad (b)\int e^x\cos x\,dx\ ,\quad (c)\int \frac{x-2}{\sqrt{x^2+4x+5}}dx$$

(2) Find the area bounded by : $y=x^2$ *and* $y=8-x^2$.

(3)Find the volume of cone-based with height is L and radius of its base is R.

(4) Show if the integral: $\int_{-\infty}^{\infty}\frac{dx}{1+x^2}$ **is convergence or divergence?**

Second: Analytic geometry: (25 mark)

(1) Write the following equation in the polar form : $x+y=\sqrt{2}$

(2) Determine the equation of the circle with the center (2, 3) and tangent to the line 3x+4y+7=0.

(3) Find the equation of the parabola with directrix $2\sqrt{5}\,x+4y+1=0$ **and its focus (2, 3).**

(4)Find and discuss an equation for the ellipse with eccentricity $\frac{5}{6}$ **, vertices** $V(0,\pm 6)$ **and sketch the graph.**

(5) Find and discuss an equation for the hyperbola with foci $F(0,\pm 5)$ **, length of conjugate axis 4 and sketch the graph.**

انتهت الأسئلة ، مع التمنيات بالتوفيق

أ. د. حمدى نورالدين – أ.د. أحمد عبد الرحمن

بسم الله الرحمن الرحيم

Department of Mathematics		قسم الرياضيات
Faculty of Science		كلية العلوم

الامتحان النهائي للفصل الدراسي الثاني للعام الجامعي ٢٠١٥/ ٢٠١٦

طلاب **المستوى الأول**

اسم المقرر ورمزه: رياضيات عامة ١ (١٠٠ ر)	الدرجة الكلية :٥٠ درجة	التاريخ : الاثنين ٢٠١٦/٦/٦م الزمن : ساعتان

أجب عن **خمسة فقط** من الأسئلة التالية:

١٠ درجات لكل سؤال (٥ درجات لكل فقرة)

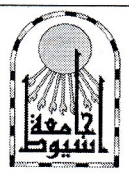
١-	أ) أوجد $\frac{dy}{dx}$ لكل من $y=\frac{3}{x^2}+\frac{5}{x^5}$ و $x^2y+y^2x+3x+1=0$.
	ب) أوجد $\frac{dy}{dx}$ لكل من $y=\frac{1}{\sin x\ \tan x}$ و $y=\sqrt{x}\sin\sqrt{\frac{1}{x}}$.
٢-	أ) أوجد $\frac{dy}{dx}$ لكل من $y=\frac{x^3}{x^2+\tan^{-1}x}$ و $y=\sin^{-1}\sqrt{1-x^2}$
	ب) أوجد المشتقة النونية للدالة $y=\cos 3x$.
٣-	أ) أوجد مفكوك ماكلورين للدالة e^x.
	ب) أثبت أن الدالة $f(x)=x^3-5x^2-3x$ تحقق فرضيتي نظرية القيمة المتوسطة في الفترة $[1,3]$ ثم أوجد نقطة c في الفترة $(1,3)$ التي تحقق النظرية.
	ج) استخدم قاعدة لوبيتال في إيجاد قيمة النهاية $\lim_{x\to\frac{\pi}{2}}\frac{1+\cos 2x}{1-\sin x}$
٤-	أ) أكتب الكسر التالي في صورة مجموع كسوره الجزئية $\frac{12x-4}{(x-4)(x^2+x-6)}$.
	ب) باستخدام مبدأ الاستنتاج الرياضي برهن على أن n^2+n+2 تقبل القسمة على 2 لجميع قيم n الصحيحة الموجبة.
٥-	أ) أوجد مجموع المتسلسلة إلى n حدا $1\cdot 1!+2\cdot 2!+3\cdot 3!+....$
	ب) أوجد نصف قطر التقارب لكل من المتسلسلتين $\sum_{n=0}^{\infty}\frac{x^n}{n!}$ و $\sum_{n=0}^{\infty}\frac{(-1)^{n+1}}{n}x^n$.
٦-	بين أن نظام المعادلات $x+y+z=a$ ، $x-y+z=b$ ، $x+y-z=c$ يكون له حل وحيد لأي اختيار للثوابت a,b,c.

انتهت الأسئلة ـــــ مع تمنياتنا لكم بالتوفيق

لجنة الممتحنين : أ.د/ فتحي هشام خضر

د. /عبدالله السيد علي الصفتي

د. عبد الله الصفتي

قسم الرياضيات كليـــــــة العلوم جـــــامعـــــة أسيـــــوط إمتحان نهاية الفصل الصيفي ٢٠١٥/٢٠١٦م	المقرر: رياضيات (١٠٥ر) (تكامل+ هندسة) الفـــرقـــة : المستوي الأول تاريخ الامتحان: الأثنين ٢٠١٦/٨/٢٩م الزمن : ساعتان الدرجة الكلية : ٥٠ درجة	

أجب عن أربعة أسئلة فقط مما يأتي:- : (١٢,٥ درجة عن كل سؤال) (ممنوع استخدام الآلة الحاسبة)

(١-أ) أحسب قيم التكاملات التالية (٧ درجات ونصف)

$$(i)\int \cot^5 x \operatorname{cosec}^4 x\,dx\,,\quad (ii)\int \frac{dx}{\cosh^2 x\sqrt{4\tanh x+13}}\,,\quad (ii)\int \frac{e^{\tan^{-1}5x}\,dx}{1+25x^2}$$

ب) أوجد المساحة المحصورة بين القطع المكافئ $y^2=4x$ والمستقيم $y=2x$ ومحور السينات (٥ درجات)

(٢-أ) إذا كانت $I_n=\int x^n\cos ax\,dx$ فأثبت أن (٦ درجات ونصف)

$$I_n=\frac{x^n\sin ax}{a}+\frac{n}{a^2}x^{n-1}\cos ax-\frac{n(n-1)}{a^2}I_{n-2}$$

ثم استخدم ذلك في إيجاد $I_4=\int x^4\cos 6x\,dx$

(ب)أوجد قيم التكاملات الآتية: (٦ درجات)

$$(i)\int \frac{2x-7}{\sqrt{x^2+8x+25}}dx\,,\ (ii)\int\sqrt{\frac{x+4}{2x+7}}\,dx\,,\ (ii)\int\frac{dx}{(x+5)\sqrt{3+x}}$$

(٣-أ) احسب قيمة التكامل $\int \frac{x\,dx}{x^2+6x+15}$ (٣ درجات ونصف)

(ب) احسب قيم التكاملات الآتية : $(i)\int_0^1 \frac{x^2dx}{\sqrt{1+x^3}}$, $(ii)\int_e^{e^2}\frac{dx}{x\ln x}$ (٤ درجات)

(ج) أوجد حل نظام المتباينات الآتية في المستوي بيانياً (٥ درجات)

$$x\ge 3\ ,\ 0\le y\le 3\ ,\ x+y\le 6$$

(٤-أ) للقطع المكافئ $y^2+8x-6y+25=0$ ادرس خصائصة مع الرسم (٦درجات ونصف)

(ب)عين مركز ونصف قطر الدائرة مع الرسم $r^2+3r\cos\theta+3\sqrt{3}\,r\sin\theta=27$ (٦ درجات)

(٥-أ) للقطع الناقص $4x^2+9y^2+16x-54y+61=0$ ادرس خصائصه مع الرسم (٥ درجات)

(ب) أثبت أن منتصفات مجموعة من الأوتار المتوازية في أي قطع مكافئ تقع علي خط مستقيم واحد يوازي محور القطع (٣ درجات)

(ج) أوجد معادلة المحور الأساسي للدائرتين وأثبت أنه عمودي علي خط المركزين حيث (٤ درجات ونصف)

$$F_1: x^2+y^2+4x+2y+3=0\,,\ F_2: x^2+y^2+8x+4y+5=0$$

انتهت الأسئلة مع التمنيات بالتوفيق ،،،،،،،،،

الممتحن: أ.د/ محمد عزب عبد الله

Department of Mathematics		قسم الرياضيات
Faculty of Science		كلية العلوم
امتحان نهاية الفصل الدراسي الثاني(2015-2016)		
2016 /6/6م	علوم	
الزمن: ساعتان	الدرجه:50	اسم المقرر105 : ر

أولا: التكامل (25درجه) أجب عن خمسة اسئله فقط:

(١)أحسب قيم التكاملات الاتيه

$$(i)\int \frac{x}{x^2+6x+13}\,dx \qquad (ii)\int \frac{1}{x\sqrt{\ln x}}\,dx$$

(2) أوجد المساحة المحصورة بين المنحني $y = x^2$ والخط المستقيم $y = x+2$

(3) أوجد قانون اختزال للتكامل الاتي $I_n = \int \tan^n x\,dx$

(4) أوجد الحجم الناتج من دوران قوس واحد من المنحني $(0 \le x \le \pi)$, $y = \sin x$ دورة كامله حول المحور السيني .

(5) باستخدام التكامل المحدد أوجد مساحة الدائرة $x^2 + y^2 = 4$

(6) احسب قيم التكاملات الاتية:

$$(i)\int x\tan^2 x\,dx \quad , \quad (ii)\int \tan x \sec^7 dx$$

ثانيا:الهندسه (25درجه) أجب عن خمسة اسئله فقط:

(1) أوجد معادلة الخط المستقيم بالاحداثيات القطبيه اذا علم انه يمر بالنقطتين $(5,\frac{\pi}{6})$, $(3,\frac{\pi}{4})$

(2) عين مركز ونصف قطر الدائرة الاتيه: $r^2 - 4r\cos(\theta - \frac{\pi}{3}) - 12 = 0$

(3) أوجد معادلة الدائرة التي تقع في الربع الاول من المستوي R^2 اذا كان نصف قطرها 4 والدائرة تمس محوري الاحداثيات .

(4) أوجد معادلة القطع المكافئ الذي بؤرته هي النقطه (2,3) ودليله هو المستقيم $x - 4y + 3 = 0$ ثم أوجد طول وترة البؤري العمودي.

(5) اثبت أن المعادلة $20x^2 + 36y^2 + 40x - 108y = 79$ تمثل قطعا ناقصا وأوجد اختلافه المركزي و احداثيات مركزه وبؤرتيه.

(6) أوجد معادلتي المماس و العمودي للقطع الزائد

$\frac{x^2}{9} - \frac{y^2}{16} = 1$ عند النقطه $(5,\frac{-16}{3})$

مع تمنياتنا بالنجاح

د/عبدالله الصفتي د/محمد حسين

Assiut University
Faculty of Science
Department of Mathematics

Final Examination in Computer (MC100)
First-level 2016

Time: 2 hours **Total Mark:50**

Answer each of the following questions:

Question 1: Choose the correct answer: [15 Marks]

1. Which statement below will result in the variable *y* containing *[1 3 5 7]*?
   a) y = linspace(1,7,4)
   b) y = 1:4:7
   c) y = linspace(1,4,7)
   d) y = 1:7:4
2. Given a matrix *A*, which Matlab command uses to find the summation value of each row in *A*?
   A=[29 39 40; 43 23 10]
   a) sum(A, 2)
   b) sum(A, [ ], 1)
   c) sum(A,1)
   d) sum(A, 1, 2)
3. Which of the following is not an acceptable name for a Matlab variable?
   a) Index2
   b) Index 2
   c) Index_2
   d) In2dex
4. Which one is not an arithmetical operator in MATLAB?
   a) \
   b) /
   c) ++
   d) .+
5. Given that A=[1 2 1 3] and B=[1 3 4 2]. Which statement below will result in the variable *C* containing *[1 6 4 6]*?
   a) A*B
   b) A.*B
   c) A*.B
   d) None of the above
6. Which Matlab command gives you the name of all variables defined in the workspace?
   a) what
   b) who
   c) which
   d) whom
7. Given the matrices *A* and *B*, which matrix operation is not allowed by Matlab?
   A = [1 3 1; 2 5 0]
   B = [1 1 5; 8 9 5]
   a) A * B
   b) A .* B
   c) A + B
   d) A – B
8. Which Matlab command allows you to delete all variables in the workspace?
   a) Delete
   b) Clear
   c) Clean
   d) Clc
9. Given a matrix *A*, which Matlab command uses to find the maximum value of each row in *A*?
   A=[29 39 40; 43 23 10]
   a) Max(A,[ ],2)
   b) Max(A,[ ],1)
   c) Max(A,1)
   d) Max(A,2)
10. which Matlab command uses to open a figure window and make it the current figure
    a) window
    b) clf
    c) create figure
    d) figure

11. Which one is not a relational operator in MATLAB?

a) =

b)~=

c)>

d)<

12. Which of the following determines the number of elements N of the matrix B = [1 2 34; 12 5 7]?

a) N = size(B)
b) N = elem(B)
c) N = length(B)
d) N = numel(B)

13. Which Matlab command allows you to generate 3x5 random values in the range [0 1]?

a) rand(3,5)
b) ran(5,3)
c) random(3,5)
d) round(3,5)

14. Which of the following is not an acceptable name for a Matlab variable?

a) function [*output*] = function_name(*inputs*)
b) *[output] function* = function_name(*inputs*)
c) function_name [*output*] = function(*inputs*)
d) [*output*] function_name = function(*inputs*)

15. Given that x = [1 2], y = [4 5], and z=[0 0]. What is the value of A=[x y]

a. 1 2 4 5
b. 1 2
4 5
c. 5 4 2 1
d. 4 5
1 2

Question 2: Examine and choose the correct answer: [10 Marks]

1. What is the value of B at the end of the program:

```
A=2;
for ii=0:2:4
        A=[A, A*ii];
end
B=A
```

a. B= 2,0,0,0
b. B= 2
2 0
2 0 0
2 0 0 0

c. B= 2 0 4 0 8 0 16 0
d. B= 2 2 4 8

2. What is the value of M at the end of the program:

```
A=[12  24  50 7  89  5];
M=A(1);
for i=2:length(A)
        if (M < A(i))
                M=A(i);
        end
end
```

a. 5
b. 89
c. 12
d. 50

3. What is the output of the following code:

```
X=[15 0 0 0 4 5];
I= Find(X,2,'first');
disp(X(i))
```

a. 15 4

b. X(i) =
   15 4
c. 1 5
d. 4 5

4. What is the output of the following code:

```
v = [3 7 2 1];
for i =1:length(v)
    v(i) = v(i) * 3;
end
v
```

a. V=
   9 21 6 4
b. V=
   9 21 6 3
c. V=
   3 21 6 3
d. 9 21 6 3

5. What is the output of the following code:

```
vec = [11  -5  33  2  8  -4  25];
vec(vec < 0) = [ ]
```

a.vec =
  1 3 4 5
b. vec =
  11 -5 33 2 8 -4 25
c. vec =
  -5 -4
d. vec =
  11 33 2 8 25

Question 3: True/False: [25 Marks]

1. Suppose that the two column vectors of *a* and *b* are of the same size. The following command will produce an error in MATLAB: *a.*b*
2. In Matlab, Addition and subtraction have the same precedence.
3. The Matlab command "type" is used to show the content of a script file
4. The Matlab operator ";" can be used within "[ ]" to define new column
5. In *plot(x,y)* Matlab command, when *x* and *y* are two vectors, they must have the same number of elements
6. In Matlab, Multiplication and division have the same precedence.
7. The Matlab command "whos" gives some information about all the variables defined in the workspace
8. In Matlab, we should use the operator "*." In order to perform the multiplication element by element
9. Given that x = [1 2], y = [4 5], and z=[0 0], it is accepted to write the following command A=[x y; z]
10. To execute a script file "search.m" in the Matlab command prompt, you can type >>search.m
11. The following variable name is accepted in Matlab V1_12
12. Matlab is an Interpreter
13. The errors are easy to fix when using a compiler instead of interpreter
14. Compiler is usually faster than interpreter
15. Matlab is Software package
16. MATLAB is not a general purpose programming language such as C/C++.
17. MATLAB is an interpreted language, slower than a compiled language such as C++.
18. MATLAB commands are specific for MATLAB usage. Most of them do not have a direct equivalent with other programming language commands.
19. MATLAB is not free.
20. MATLAB may behave as a calculator or as a programming language
21. MATLAB combine nicely calculation and graphic plotting.
22. MATLAB is relatively easy to learn
23. MATLAB is optimized to be relatively fast when performing matrix operations
24. The percent sign "%" is used for Matlab comments
25. The semi-colon ";" will suppress the output of a Matlab command

Good Luck

Dr. Mohammed M. Abdelsamea